

# NAVAL POSTGRADUATE SCHOOL Monterey, California



**HYDROGRAPHIC DATA ALONG THE CALIFORNIA  
COAST FROM PT. LOBOS TO CAPE SAN MARTIN  
22-25 October 1995**

by

Thomas A. Rago  
Curtis A. Collins

December 1995

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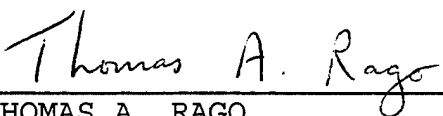
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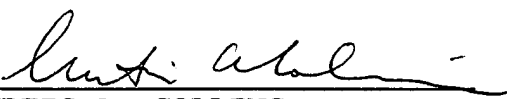
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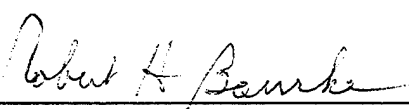
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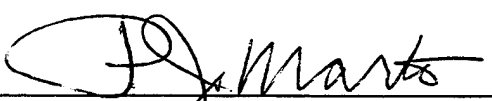
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13. ABSTRACT (maximum 200 words) This data report presents hydrographic (CTD) data collected during the Operational Oceanography class (OC-3570) cruise of 22-25 October 1995. The study area encompassed a region from Point Lobos (off Carmel, Ca.) south to Cape San Martin (35° 53'N), extending from the coast to approximately the 1000m isobath. The survey consisted of 15 across-shore transections, each made up of six CTD stations nominally located above the 50, 100, 250, 500, 750, and 1000 meter isobaths, respectively. A total of 83 full-depth casts were completed. The data are presented primarily in tabular form for selected pressures. Some sea surface horizontal maps, as well as a T/S plot, are also presented.				
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from Pt. Lobos to Cape San Martin

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and  
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## INTRODUCTION

The data included in this report were collected during the Autumn 1995 Operational Oceanography class (OC-3570) cruise of the Naval Postgraduate School. The area of operations extended from Point Lobos (off Carmel, California) south to Cape San Martin (35° 53'N), and from the shore to approximately the 1000-meter isobath. This survey, consisting of 15 across-shore transections (Figure 1), was conducted aboard the research vessel *Point Sur* between 22 and 25 October 1995. Each transection was comprised of 6 Conductivity-Temperature-Depth (CTD) casts, nominally located above the 50, 100, 250, 500, 750, and 1000 meter isobaths, respectively. A total of 83 CTD casts were completed. Additionally, an Acoustic Doppler Current Profiler (ADCP) was operated throughout the cruise.

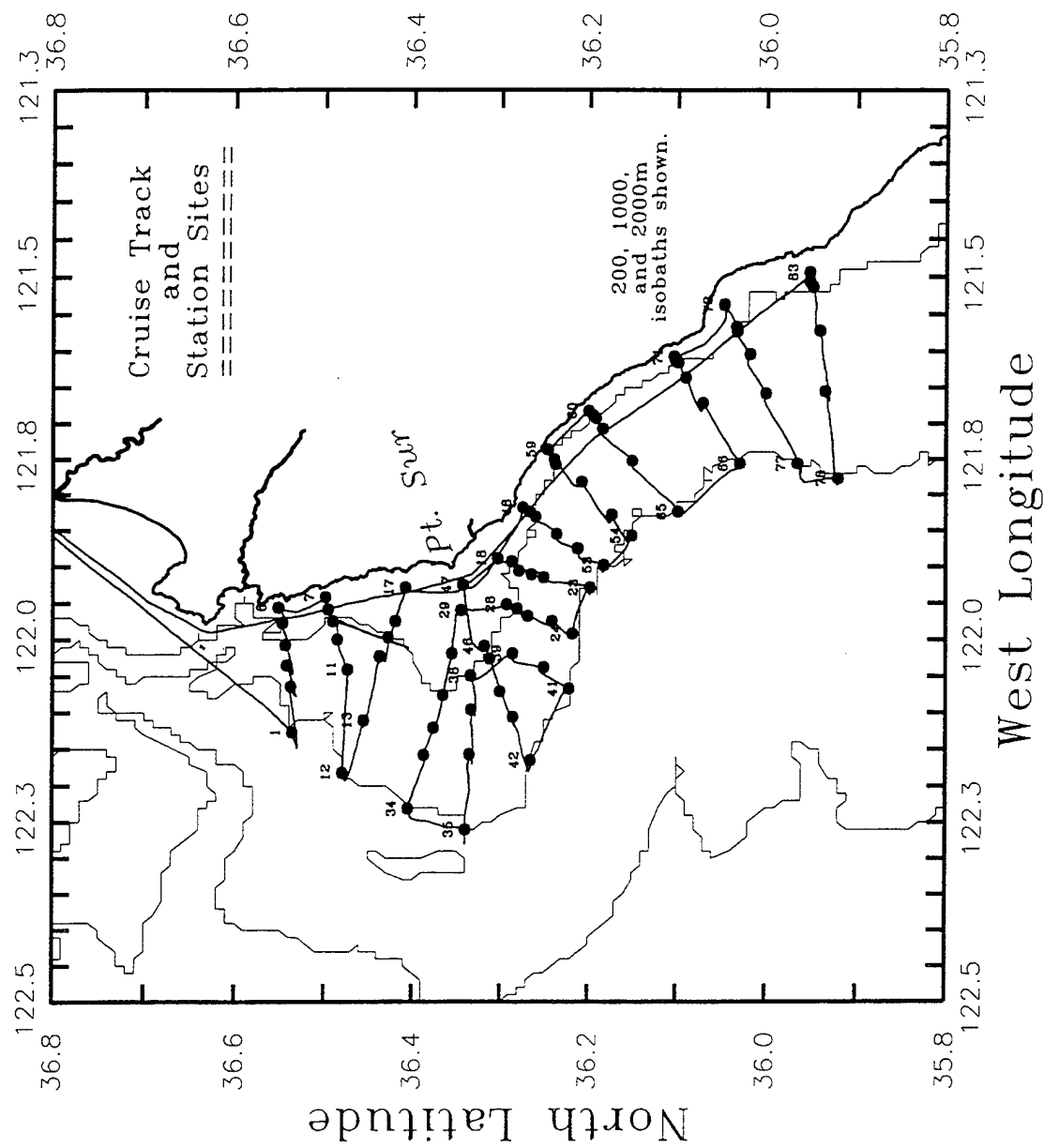
The *R/V Point Sur* departed from Moss Landing, California, at 1533 Universal Time (UT) on 22 October 1995 and arrived at CTD station 1 (Figure 1) at 1831 UT to begin hydrographic observations. After completing the CTD cast at station 1, the ship successively occupied the rest of the CTD stations (Figure 1), starting and ending each transection as follows:

A (casts 1-6):	1831-2331 UT, 22 Oct.
B (casts 7-11):	2354-0352 UT, 22-23 Oct.
C (casts 12-17):	0445-0920 UT, 23 Oct.
I (casts 18-23):	1020-1355 UT
H (casts 24-28):	1421-1705 UT
D (casts 29-34):	1728-2139 UT, 23 Oct.
E (casts 35-38):	2209-0201 UT, 23-24 Oct.
G (casts 39-41):	0229-0453 UT, 24 Oct.
F (casts 42-47):	0533-1029 UT
J (casts 48-53):	1124-1442 UT
K (casts 54-59):	1511-1901 UT
L (casts 60-65):	1937-2325 UT, 24 Oct.
M (casts 66-71):	0006-0407 UT, 25 Oct.
N (casts 72-77):	0455-0907 UT
P (casts 78-83):	0942-1442 UT.

Upon completion of CTD 83 at 1442 UT on 25 October, the ship steamed back to Moss Landing, arriving there at 2204 UT that same day. A listing of all CTD stations occupied during the cruise is given in Table 1.

The personnel on this cruise were: Dr. Curtis Collins, Naval Postgraduate School (NPS); Mr. Thomas Rago, NPS; Mr. Paul Jessen, NPS; Mr. Vernon Anderson, NPS; Mr. Chuck Cheaney, Moss Landing Marine Laboratories (MLML); LCDR Ming-Jer Huang, Taiwanese Navy (NPS); LT Akira Tanaka, Japanese Navy (NPS); and LT Thomas P. Wojahn, USCG (NPS).





**Figure 1.** CTD station locations and numbers for the 22-25 October 1995 cruise aboard the R/V Point Sur. The cruise track is also shown. Not all station numbers are printed. However, station numbering progresses sequentially along the cruise track.

## HYDROGRAPHIC DATA ACQUISITION AND CALIBRATION

Hydrographic data were acquired using a Neil Brown Mark III-B CTD. A General Oceanics rosette sampler was attached to the CTD and was equipped with eleven 5-liter Niskin bottles for *in situ* water sampling. Generally, two water samples-- one at the deepest depth of the cast and one near the surface-- were collected during the upcast at each station for salinity calibration. A Sea Tech Inc. 25 cm transmissometer was also attached to the CTD, and its raw data stream was incorporated with that of the CTD itself. The CTD sampling rate was 32 Hz, and raw data were collected using a software package developed by EG&G Marine Instruments. CTD data were acquired only on the downcast. A lowering speed of approximately  $30 \text{ m min}^{-1}$  was used to the bottom of the thermocline ( $\approx 100\text{-}150 \text{ m}$ ), then  $60 \text{ m min}^{-1}$  to the bottom. The data were acquired using an HP Vectra computer.

In addition to the CTD data, an underway data acquisition loop recorded 30-second averages of meteorological and near-surface oceanographic parameters, such as temperature and salinity at 2-meter's depth, wind speed and direction, air temperature, barometric pressure, and visible and infrared radiation. The sensors used to acquire this data included Seabird temperature and conductivity sensors for the temperature and salinity, an R. M. Young anemometer for the wind speed and direction, and an Epply pyronometer for the visible and infrared radiation. The underway data were acquired on an HP310 computer.

The temperature and pressure sensors on the CTD were calibrated shortly before and after the cruise. Since there were no significant differences between pre- and post-cruise calibrations, the pre-cruise calibrations were used both for data collection during the cruise and for final data processing after the cruise. The pressure calibration was carried out using a Chandler Engineering deadweight tester as a standard. Indicated pressures from the standard and the CTD sensor were recorded at 19 approximately equally spaced pressures from 0 to 3100 dbar. Regressions were then performed fitting the CTD pressures to the standard. The result yielded a linear fit (RMS residual = 0.1711 dbar) with a slope of 0.9989. The CTD pressure offset recorded on deck at the beginning of each cast was used as the intercept.

The temperature calibration was done using a Rosemount platinum resistance thermometer (SPRT) as a standard. This standard sensor had been recalibrated in the laboratory four months earlier using water's triple point and gallium's melt point as references. A temperature bath of 70-80 liters of fresh water in an insulated tub was used to compare the standard and CTD sensor at  $1^\circ\text{C}$  increments from  $1^\circ$  to  $18^\circ\text{C}$ . Thirty data points were collected at each temperature and then averaged to yield a single value for each step. A regression was run on the 18 data points, revealing a linear difference between the standard and the CTD temperature sensor. The coefficients were 0.9997 (slope) and  $+0.0022^\circ\text{C}$  (intercept), while the RMS residual was  $0.0001^\circ\text{C}$ .

**Table 1.** List of CTD stations occupied by the *R/V Point Sur* during the OC-3570 class cruise of 22-25 October 1995. Date, time, station number, location, air temperature, and wind speed and direction are given.

Date	Time (UT)	Sta No.	Latitude (N)	Longitude (W)	Wind		Air	
					Dir (°T)	Speed (m s <sup>-1</sup> )	Temp (°C)	
22 Oct.	1831	1	36°29.20	122°07.61	314.7	5.9	16.6	
	2007	2	36°29.30	122°03.83	252.8	7.6	16.7	
	2116	3	36°29.56	122°02.11	259.9	7.2	17.0	
	2213	4	36°29.67	122°00.42	253.4	6.0	16.1	
	2256	5	36°29.88	121°58.59	026.7	1.2	16.4	
	2322	6	36°30.14	121°57.38	358.8	1.2	16.8	
	2354	7	36°26.95	121°56.55	238.8	2.8	16.8	
23 Oct.	0012	8	36°26.77	121°57.55	300.2	3.3	16.9	
	0037	9	36°26.44	121°58.48	279.0	2.8	17.1	
	0231	10	36°26.14	121°59.99	303.2	3.1	15.4	
	0321	11	36°25.42	122°02.45	261.4	5.3	15.1	
	0445	12	36°25.77	122°10.89	256.6	6.9	14.6	
	0600	13	36°24.33	122°06.68	234.2	5.9	14.7	
	0711	14	36°23.24	122°01.37	234.7	3.1	14.4	
	0800	15	36°22.69	121°59.81	040.9	2.1	14.5	
	0832	16	36°22.20	121°58.49	060.5	1.3	14.7	
	0908	17	36°21.51	121°55.76	188.2	1.3	14.2	
	1020	18	36°15.21	121°53.35	127.4	5.2	14.6	
	1044	19	36°14.24	121°53.58	128.2	3.0	14.2	
	1105	20	36°13.74	121°54.34	124.1	0.6	13.9	
	1133	21	36°12.88	121°54.64	122.4	2.1	13.9	
	1211	22	36°12.04	121°54.93	142.6	0.6	14.1	
	1317	23	36°08.90	121°55.75	030.4	2.9	13.0	
	1421	24	36°10.08	121°59.55	064.2	2.1	13.6	
	1514	25	36°11.48	121°58.50	083.5	2.3	13.7	
	1559	26	36°13.13	121°58.09	101.3	1.6	14.1	
	1631	27	36°13.86	121°57.45	094.0	0.8	13.1	
	1654	28	36°14.59	121°57.14	144.0	0.9	15.6	
	1728	29	36°17.71	121°57.60	154.2	0.4	15.7	
	1807	30	36°18.33	122°01.16	165.6	1.8	14.5	
	1842	31	36°18.93	122°04.55	085.6	0.4	15.0	
	1914	32	36°19.57	122°07.27	106.1	0.7	15.1	
	1955	33	36°20.23	122°09.47	063.8	0.4	15.0	
	2054	34	36°21.31	122°13.84	357.0	0.7	15.4	
	2209	35	36°17.39	122°15.60	283.8	2.7	15.1	
	2345	36	36°17.12	122°09.43	263.9	2.7	15.2	
	24 Oct.	0052	37	36°17.01	122°05.76	209.6	3.5	15.0
		0145	38	36°17.06	122°02.93	253.2	5.0	14.8
		0229	39	36°14.17	122°01.11	286.1	4.6	14.5
		0314	40	36°12.02	122°02.31	289.1	5.5	14.3

Table 1. (continued)

Date	Time (UT)	Sta No.	Latitude (N)	Longitude (W)	Wind		Air Temp (°C)
					Dir (°T)	Speed (m s <sup>-1</sup> )	
	0408	41	36°10.29	122°04.03	303.3	4.9	14.2
	0533	42	36°12.90	122°09.91	255.6	4.0	14.7
	0650	43	36°14.13	122°06.37	226.7	5.1	14.5
	0750	44	36°15.03	122°04.29	183.2	3.1	14.4
	0844	45	36°15.74	122°01.54	240.0	6.0	14.2
	0918	46	36°16.12	122°00.52	289.1	4.7	14.0
	1019	47	36°17.61	121°55.51	266.0	5.2	13.3
	1124	48	36°13.49	121°49.05	261.6	3.3	14.3
	1140	49	36°13.02	121°49.41	236.3	4.6	13.6
	1159	50	36°12.60	121°49.83	308.6	6.2	13.4
	1232	51	36°11.16	121°51.31	273.3	5.2	13.3
	1312	52	36°09.73	121°52.52	286.8	6.0	13.4
	1405	53	36°07.97	121°53.89	286.9	4.7	13.5
	1511	54	36°06.04	121°51.41	277.8	6.0	13.6
	1613	55	36°07.43	121°49.67	279.0	6.8	13.4
	1715	56	36°09.47	121°46.92	279.3	2.9	13.5
	1759	57	36°11.25	121°45.41	283.6	2.2	13.8
	1824	58	36°11.35	121°44.98	254.5	1.4	14.0
	1850	59	36°11.82	121°44.14	244.2	0.2	14.4
	1937	60	36°09.02	121°40.92	341.4	0.9	14.3
	1954	61	36°08.73	121°41.29	322.9	0.5	14.3
	2015	62	36°08.53	121°41.50	076.9	0.2	14.7
	2042	63	36°08.05	121°42.42	282.0	5.8	14.2
	2129	64	36°06.04	121°45.14	296.2	4.8	14.1
	2243	65	36°02.93	121°49.46	213.4	7.3	13.8
25 Oct.	0006	66	35°58.77	121°45.37	232.9	3.3	14.0
	0136	67	36°01.25	121°40.27	296.5	6.4	14.0
	0230	68	36°02.42	121°38.15	272.0	8.2	14.4
	0315	69	36°02.93	121°36.90	110.0	0.9	14.3
	0343	70	36°03.11	121°36.79	065.6	0.4	14.3
	0400	71	36°03.21	121°36.44	252.2	0.2	14.1
	0455	72	35°59.82	121°32.25	087.2	0.6	14.0
	0522	73	35°59.00	121°34.02	254.5	3.8	14.6
	0540	74	35°58.95	121°34.39	267.8	5.2	14.7
	0608	75	35°58.10	121°36.26	259.3	7.6	14.5
	0700	76	35°57.03	121°39.46	276.0	8.3	14.1
	0823	77	35°54.90	121°45.38	232.1	9.6	13.9
	0942	78	35°52.23	121°46.65	281.9	7.2	14.2
	1128	79	35°53.07	121°39.30	243.5	8.4	14.1
	1250	80	35°53.44	121°34.35	301.0	8.1	14.3
	1347	81	35°53.91	121°30.80	339.8	1.5	14.0
	1412	82	35°54.11	121°30.38	316.5	1.5	13.6
	1435	83	35°54.11	121°29.63	000.5	0.2	13.7

There was no pre-cruise calibration of the CTD conductivity sensor. A CTD conductivity calibration had been entered into the CTD acquisition programming; but it immediately became apparent at the first CTD station that that calibration was incorrect. (Surface salinity values were approximately  $S=1$  too high.) A new calibration was estimated from that first CTD cast using historical deep CTD salinity values ( $S=34.445$  @ 1010 dbar) and the surface salinity values (obtained from the underway data acquisition loop). This at-sea conductivity calibration was used for data collection for the remainder of the cruise.

After the cruise, a conductivity calibration was performed on the CTD. Five salt water baths (70-80 liters each) of five different conductivities (salinities)-- nominally, 57, 51, 41, 31, and 25 mmhos  $\text{cm}^{-1}$ -- were used to compare the CTD sensor values with the actual conductivities. The CTD was successively dipped into each salt water bath and its conductivity value recorded concurrently with the bath temperature value as recorded by the Rosemount SPRT. At the same time, a water sample was collected for analysis by a Guildline Autosol 8400B salinometer. Four sets of values were collected for each salt water bath. A regression of the CTD conductivities versus the Autosol conductivities was then run for the 20 data points, yielding a linear relationship with a slope of 0.9857 and an offset of  $+0.0040$  mmhos  $\text{cm}^{-1}$ . (The RMS residual was 0.0027 mmhos  $\text{cm}^{-1}$ .) This post-cruise conductivity calibration was used for final data processing.

A total of 167 water samples was taken at 83 CTD stations for calibration of the CTD salinity data. The CTD pressure, conductivity, and temperature were recorded as each sample was taken. These numbers, after applying the appropriate calibration coefficients, were used to calculate salinity and the results compared with the water sample salinities determined using a Guildline Autosol 8400B salinometer in the laboratory. The station, depth of sample, CTD salinity calculated using the appropriate calibrations, water sample salinity from the Guildline Autosol, and difference between CTD and Autosol salinities are listed in Table 2. The mean and standard deviation of the differences between the CTD salinities and sample salinities were calculated. Data points greater than two standard deviations from the mean were discarded. The mean of the remaining salinity differences (158 data points) was calculated to be  $S=0.0013$ . After this offset was subtracted from the CTD salinities, the differences between the CTD and Autosol salinities were recomputed, yielding a standard deviation of the differences of  $S=0.0074$ . Finally, a regression was run on the "offset-corrected" data values, which revealed a linear relationship (RMS residual of  $S=0.0073$ ) with a slope of 1.0014 and an offset of  $S=-0.0477$ . These were the final adjustments to the CTD salinity.

**Table 2.** List of CTD salinities (calculated from the corrected pressure, temperature, and conductivity readings), water sample salinities (measured by the Guildline Autosol 8400B salinometer of samples collected at the same depths from which the CTD salinities were measured), and the differences between the two sets of salinities.

Station	Pressure (dbar)	Salinity (PSS)		
		CTD	Bottle	Difference
1	1037.6	34.473	34.470	0.003
	1.5	33.283	33.276	0.007
2	788.0	34.404	34.401	0.003
	527.4	34.223	34.216	0.007
	1.6	33.301	33.292	0.009
3	528.1	34.224	34.220	0.004
	2.3	33.299	33.295	0.004
4	213.3	34.002	33.995	0.007
	2.3	33.315	33.311	0.004
5	91.5	33.694	33.697	-0.003
	2.5	33.343	33.333	0.010
6	41.4	33.534	33.528	0.006
	2.2	33.407	33.396	0.011
7	43.0	33.545	33.536	0.009
	3.1	33.434	33.431	0.003
8	95.8	33.888	33.872	0.016
	95.1	33.887	33.877	0.010
	1.4	33.447	33.436	0.011
9	1.8	33.377	33.367	0.010
10	564.2	34.284	34.270	0.014
	1.9	33.308	33.296	0.012
11	702.4	34.373	34.356	0.017
	1.3	33.293	33.277	0.016
12	1.8	33.281	33.282	-0.001
13	741.4	34.350	34.360	-0.010
	741.3	34.350	34.357	-0.007
	2.8	33.285	33.294	-0.009
14	501.3	34.197	34.205	-0.008
	501.7	34.197	34.205	-0.008
15	210.9	34.036	34.046	-0.010
	2.4	33.363	33.374	-0.011
16	2.4	33.350	33.363	-0.013
17	50.0	33.560	33.545	0.015
	2.8	33.463	33.456	0.007
18	41.1	33.522	33.508	0.014
	2.0	33.395	33.387	0.008
19	90.2	33.796	33.787	0.009
	1.7	33.367	33.359	0.008

Table 2. (continued)

Station	Pressure (dbar)	Salinity (PSS)		
		CTD	Bottle	Difference
=====				
20	257.5	34.061	34.054	0.007
	1.9	33.363	33.352	0.011
21	475.5	34.205	34.206	-0.001
	1.8	33.368	33.361	0.007
22	866.1	34.429	34.421	0.008
	1.3	33.382	33.378	0.004
23	952.2	34.454	34.446	0.008
	1.4	33.371	33.364	0.007
24	988.2	34.471	34.463	0.008
	1.4	33.473	33.467	0.006
25	723.6	34.370	34.364	0.006
	1.9	33.427	33.424	0.003
26	481.9	34.243	34.239	0.004
	1.7	33.379	33.374	0.005
27	150.4	33.920	33.917	0.003
	1.9	33.370	33.364	0.006
28	89.3	33.799	33.784	0.015
	2.3	33.360	33.358	0.002
29	63.3	33.675	33.664	0.011
	2.2	33.368	33.369	-0.001
30	99.8	33.815	33.819	-0.004
	2.3	33.375	33.371	0.004
31	196.6	34.002	33.993	0.009
	2.0	33.305	33.305	0.000
32	539.2	34.242	34.240	0.002
	1.5	33.292	33.288	0.004
33	762.9	34.364	34.364	0.000
	1.5	33.270	33.271	-0.001
34	1026.3	34.476	34.477	-0.001
	1.0	33.276	33.272	0.004
35	963.3	34.468	34.473	-0.005
	1.7	33.291	33.287	0.004
36	756.1	34.395	34.400	-0.005
	1.6	33.286	33.291	-0.005
37	512.6	34.221	34.222	-0.001
	2.5	33.277	33.278	-0.001
38	268.1	34.074	34.082	-0.008
	2.2	33.282	33.285	-0.003
39	511.2	34.261	34.263	-0.002
	2.2	33.365	33.366	-0.001
40	806.4	34.390	34.391	-0.001
	1.7	33.443	33.449	-0.006
41	1000.5	34.476	34.477	-0.001
	2.1	33.434	33.435	-0.001
=====				

Table 2. (continued)

Station	Pressure (dbar)	Salinity (PSS)		
		CTD	Bottle	Difference
42	1032.6	34.489	34.485	0.004
	1.7	33.279	33.277	0.002
43	776.5	34.396	34.398	-0.002
	1.4	33.295	33.296	-0.001
44	516.8	34.231	34.236	-0.005
	2.2	33.327	33.325	0.002
45	273.7	34.071	34.070	0.001
	2.4	33.364	33.365	-0.001
46	100.4	33.710	33.709	0.001
	2.0	33.427	33.426	0.001
47	45.1	33.570	33.573	-0.003
	1.4	33.413	33.411	0.002
48	37.6	33.537	33.536	0.001
	2.1	33.483	33.484	-0.001
49	88.9	33.780	33.785	-0.005
	1.9	33.489	33.486	0.003
50	193.4	34.055	34.055	0.000
	1.3	33.522	33.520	0.002
51	495.0	34.212	34.226	-0.014
	2.1	33.440	33.443	-0.003
52	846.7	34.409	34.413	-0.004
	1.9	33.382	33.381	0.001
53	1027.3	34.469	34.466	0.003
	1.9	33.362	33.358	0.004
54	1035.1	34.479	34.472	0.007
	1.8	33.361	33.356	0.005
55	746.3	34.361	34.357	0.004
	1.9	33.366	33.360	0.006
56	486.5	34.230	34.226	0.004
	2.2	33.531	33.526	0.005
57	198.4	34.050	34.042	0.008
	2.2	33.522	33.521	0.001
59	67.1	33.683	33.683	0.000
	2.3	33.516	33.512	0.004
60	39.6	33.576	33.577	-0.001
	2.7	33.518	33.518	0.000
61	110.1	33.869	33.861	0.008
62	189.2	34.032	34.032	0.000
	2.1	33.521	33.517	0.004
63	433.1	34.165	34.161	0.004
	2.0	33.500	33.492	0.008
64	803.9	34.393	34.388	0.005
	1.6	33.388	33.380	0.008



Table 2. (continued)

Station	Pressure (dbar)	Salinity (PSS)		
		CTD	Bottle	Difference
65	982.8	34.457	34.448	0.009
	1.5	33.365	33.358	0.007
66	1059.4	34.488	34.477	0.011
	1.8	33.365	33.357	0.008
67	707.6	34.320	34.317	0.003
	1.8	33.520	33.512	0.008
68	474.4	34.182	34.177	0.005
	1.6	33.520	33.513	0.007
69	235.3	34.058	34.054	0.004
	1.7	33.519	33.512	0.007
70	83.7	33.730	33.724	0.006
	2.5	33.518	33.528	-0.010
71	44.1	33.640	33.652	-0.012
	2.0	33.523	33.533	-0.010
72	2.5	33.532	33.524	0.008
73	114.8	33.743	33.737	0.006
74	239.5	34.072	34.083	-0.011
	2.0	33.521	33.533	-0.012
75	1.6	33.516	33.528	-0.012
76	681.3	34.346	34.359	-0.013
	1.7	33.523	33.534	-0.011
77	957.1	34.463	34.474	-0.011
	1.8	33.375	33.385	-0.010
78	1.5	33.361	33.371	-0.010
79	748.1	34.375	34.389	-0.014
	1.6	33.452	33.463	-0.011
80	487.7	34.195	34.206	-0.011
	2.1	33.512	33.521	-0.009
81	190.0	33.998	34.009	-0.011
	1.3	33.516	33.523	-0.007
82	102.8	33.808	33.820	-0.012
	3.0	33.524	33.536	-0.012
83	42.5	33.651	33.660	-0.009

## HYDROGRAPHIC DATA PROCESSING

The raw CTD data were processed on a PC-compatible computer system. The software automatically flags suspicious pressure, conductivity, temperature, and transmissivity data based on user-specified first difference criteria, and allows the user to examine and interpolate across flagged data if necessary. After the elimination through interpolation of any bad data, salinity was calculated from corrected values of temperature, pressure, and conductivity according to the algorithm of Lewis and Perkin (1981) and utilizing a dual time lag filter to remove time lag spikes. The data were then averaged to 2 dbar. The final salinity correction (as described above) was then applied.

## ADCP DATA ACQUISITION AND CALIBRATION

The Acoustic Doppler Current Profiler (ADCP) data were collected using an RD Instruments vessel-mounted ADCP (VM-ADCP) with a nominal frequency of 150 kHz. Data were collected using a 386-type PC and the Data Acquisition Software (DAS) provided by RD Instruments in up to 64 eight-meter bins over a three-minute sampling ensemble. Navigation information was supplied to the DAS from a Trimble Model 10X GPS receiver. The data were collected on 1.2M 3.5" floppy diskettes, with approximately 25 hours of data on each diskette.

A calibration run was made early in the cruise (after CTD 9) to quantify rotation and sensitivity errors in the ADCP data. Rotation error ( $\alpha$ ) is made up of two components. The first is any alignment error between the centerline of the ship and that of the mounted instrument, while the second is gyroscopic compass error. The sensitivity error ( $\beta$ ) is generally very small and is due to errors in beam geometry. A thorough description of these errors and the methods used to quantify them may be found in Joyce (1989). The calibration run consisted of two transections (36° 25.9N, 121° 58.5W to 36° 21.4N, 122° 00.6W, and vice-versa), both made with the bottom tracking feature of the ADCP switched on. Following the methods of Joyce (1989), we calculated the following calibration coefficients:  $\alpha = -1.85$  and  $1+\beta = 1.008$ . Raw doppler velocity data were rotated by  $\alpha$  and multiplied by  $1+\beta$  before any further processing of the data.

## ADCP DATA PROCESSING

ADCP data were processed one diskette (approximately 25 hours) at a time. Once the raw ADCP data were corrected for rotation and sensitivity errors as described above, the first step of data processing was the correction of navigation data and the calculation of ship's velocity. Geographic positions as recorded by the DAS at the end of each three-minute ensemble were checked

for obviously bad data points and corrected by interpolation if necessary. Once corrected, these data were then used to calculate the u (eastward) and v (northward) components of ship's velocity.

The next processing step was the determination of the depth (bin number) to which the data remained reliable for each three-minute ensemble. This depth is a function of either the bottom depth or the Percent Good Return (PGR). The PGR is the percentage of pings for a given ensemble having good solutions based either on a signal-to-noise threshold or on error velocity. If the PGR fell below 50% for a given bin, the data in that and all deeper bins for that ensemble were eliminated from further consideration.

The bottom depth provided another limit for the deepest bin of good data if the bottom were shallower than about 350m. Bottom depth could be determined directly when the bottom tracking option was turned on, or by a sharp subsurface increase in the Acoustic Gain Control (AGC) signal when the bottom tracking was turned off. The shallowest bin as determined by PGR or bottom depth was defined as the bin to which data remained reliable for a given ensemble.

The next step in processing the ADCP data was the calculation of a reference layer velocity. A reference layer three bins wide (24m) was used for these data. Choosing the depth of the reference layer is somewhat arbitrary. However, the general criterion used was to choose a reference layer sufficiently deep that the velocity within the layer was nearly constant, but not so deep that most or all of the ensembles being processed would not have good data down to the depth of the reference layer. The bins used to define a reference layer were not necessarily the same for each diskette of ADCP data.

An absolute reference layer velocity was calculated by subtracting the u and v components of ship's velocity from the u and v components of the raw reference layer velocity. The absolute reference layer velocity was then smoothed by applying a low-pass filter with a cutoff period of 25 minutes.

Once a smoothed absolute reference layer velocity had been determined, the raw velocity profiles of each ensemble were adjusted to the filtered reference layer velocity to yield the final (3-minute) absolute water velocity profiles. Each ensemble was then finally examined visually for any remaining bad profiles that might have slipped through the preceding processing.

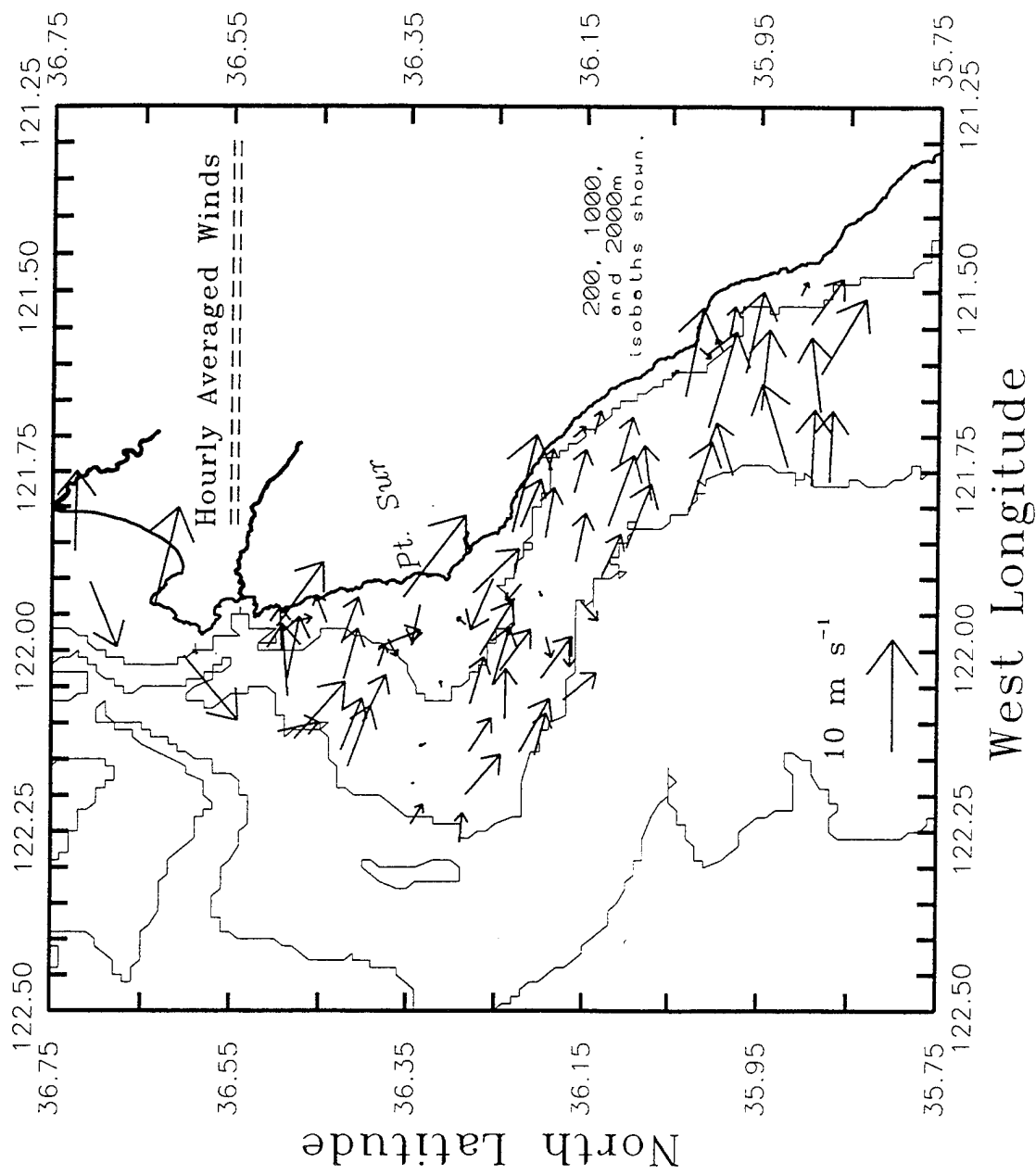
## DATA PRESENTATION

The CTD station positions and numbers for the cruise are shown in Figure 1. Hourly averaged wind vectors during the cruise are shown in Figure 2. Figures 3 and 4 are maps of sea surface temperature (SST) and sea surface salinity (SSS), respectively, collected by the underway data acquisition loop. Figure 5 is ADCP-derived currents for the depth range 15-31m. Finally,

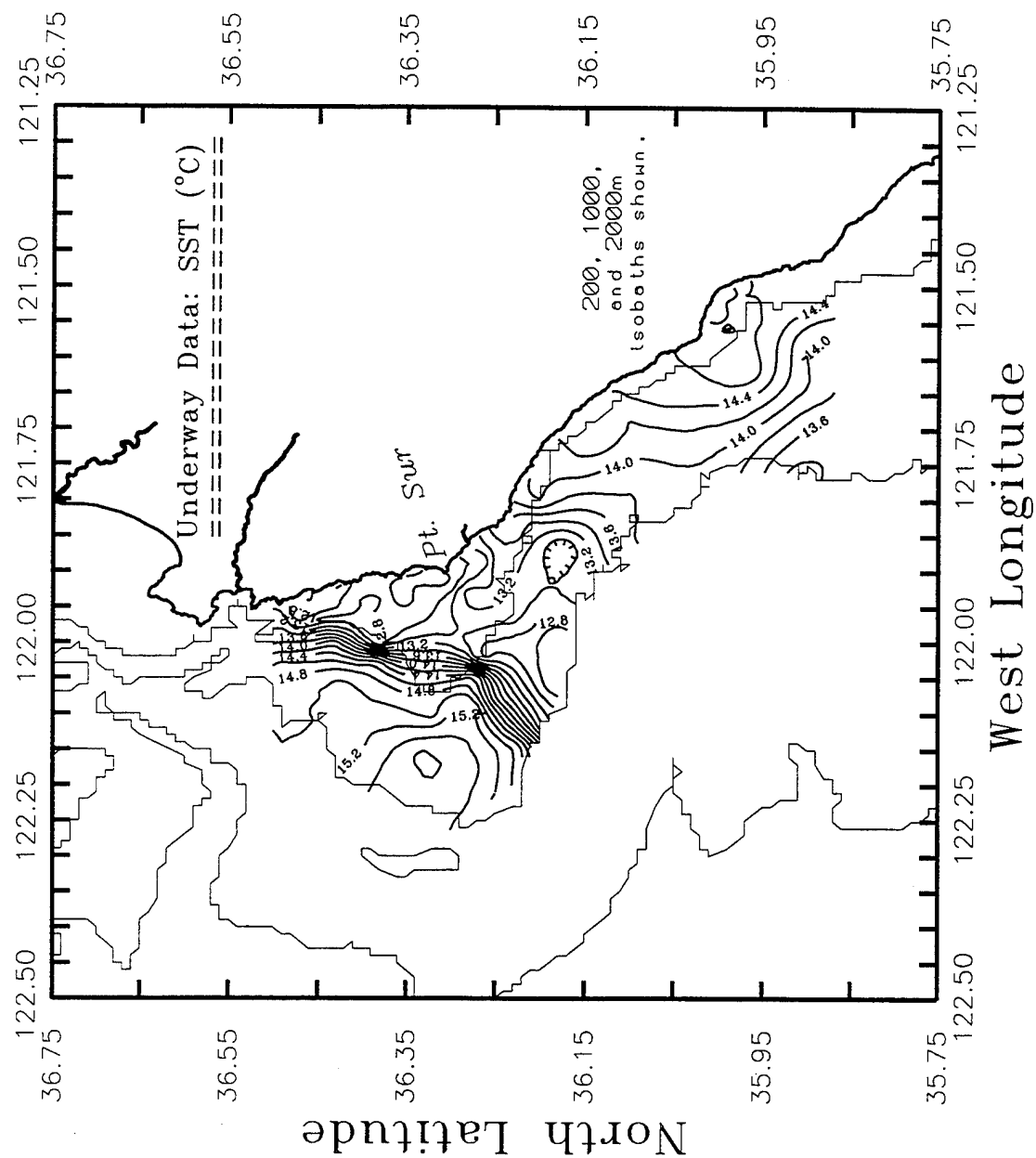
Figure 6 is a T/S diagram which includes data from all CTD stations completed during the cruise.

#### **ACKNOWLEDGEMENTS**

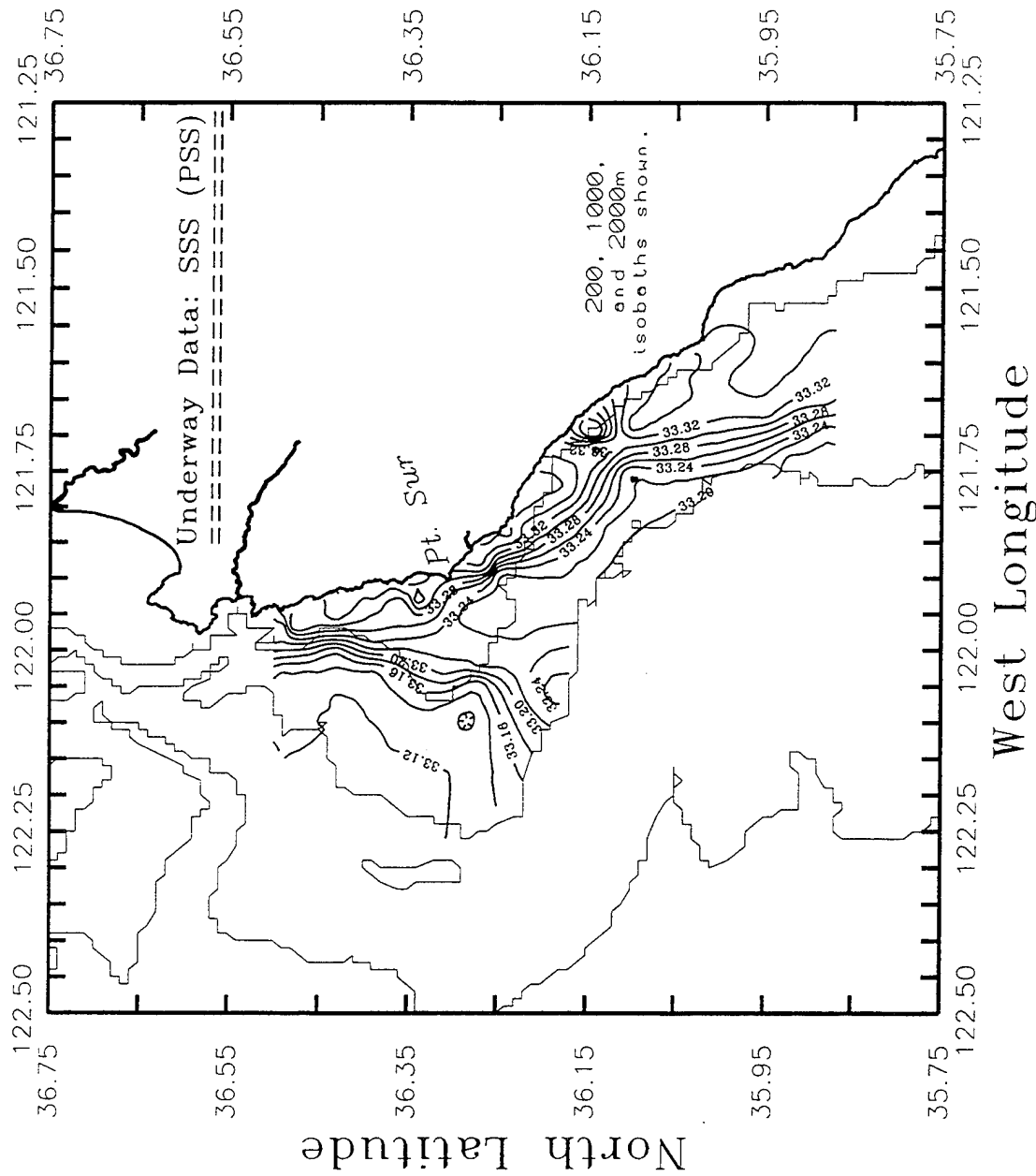
This work was funded by the Oceanographer of the Navy. The assistance of Mr. Paul Jessen in processing the ADCP data was invaluable. Finally, the able assistance of the officers and crew of the *R/V Point Sur* is much appreciated.



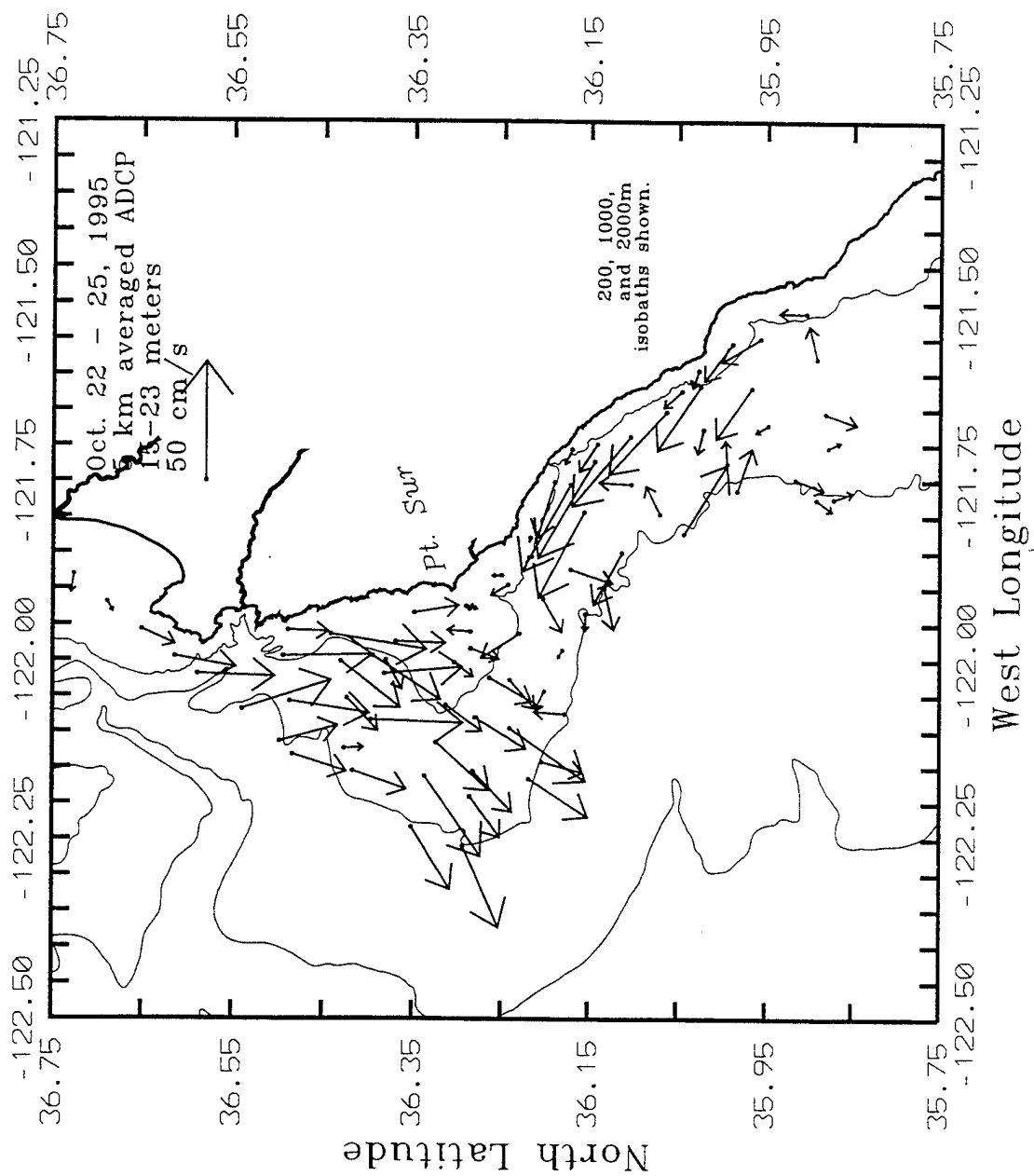
**Figure 2.** Hourly averaged wind vectors measured at a height of 10 m from the deck of the R/V Point Sur during the 22-25 October 1995 cruise.



**Figure 3.** Map of surface temperature ( $^{\circ}\text{C}$ ) as measured by the underway data acquisition loop during the cruise of 22-25 October 1995 aboard the R/V Point Sur. The temperature sensor is located along the keel of the ship at an approximate depth of 3 meters.

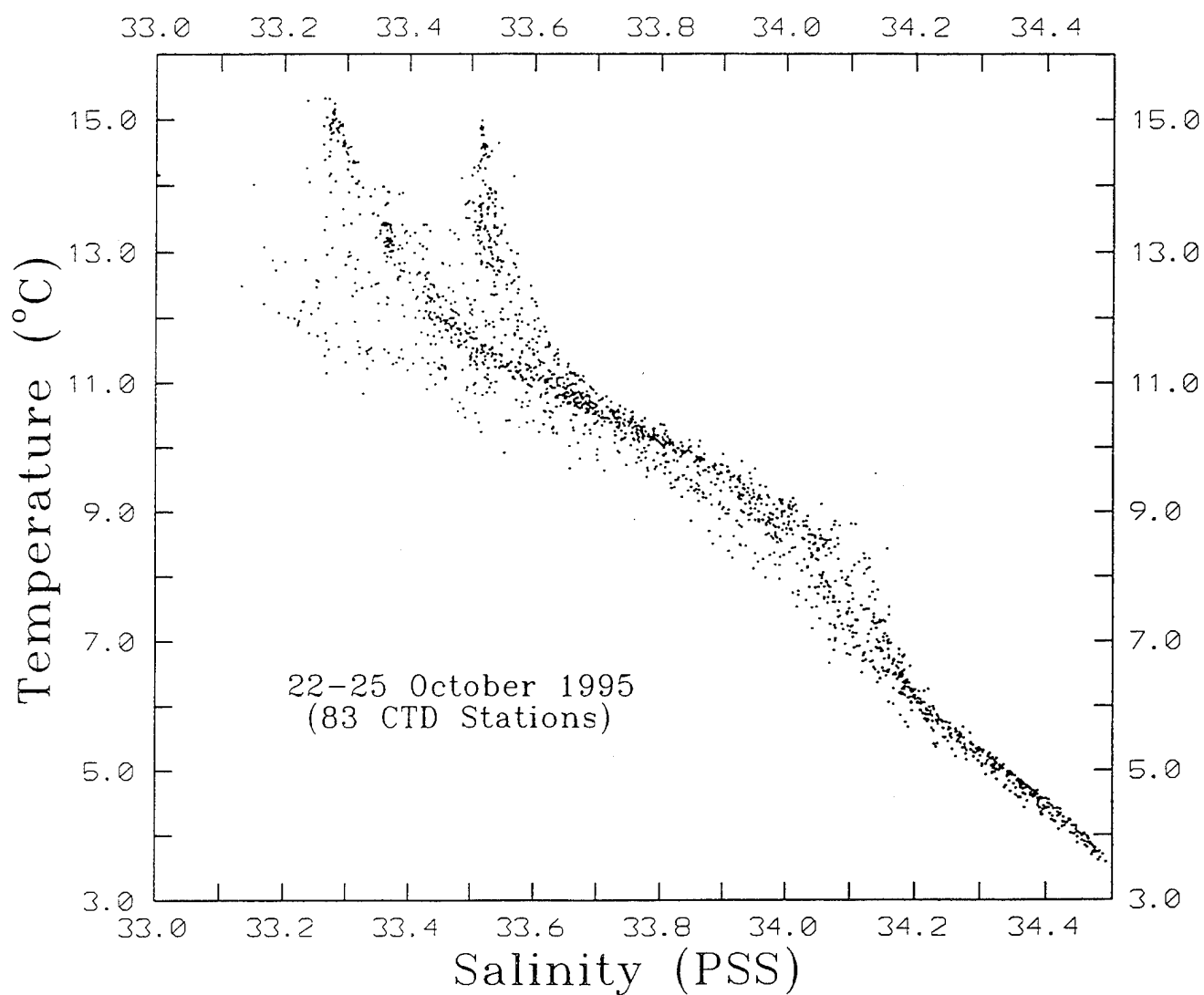


**Figure 4.** Map of surface salinity (PSS) as measured by the underway data acquisition loop during the cruise of 22-25 October 1995 aboard the R/V Point Sur. The conductivity (salinity) sensor is located along the keel of the ship at an approximate depth of 3 meters.



**Figure 5.** 5 km-averaged ADCP current vectors ( $\text{cm s}^{-1}$ ) from 15-23m during the occupation of the CTD stations of the 22-25 October 1995 cruise aboard the R/V Point Sur.





**Figure 6.** T/S diagram which includes selected data from all CTD stations completed during the 22-25 October 1995 cruise aboard the *R/V Point Sur*. The data included in this diagram are listed in the Appendix.

## APPENDIX

### CTD DATA LISTINGS

In the following table, station data are listed in numerical order. The potential density anomaly ( $\gamma_\theta$ ) is calculated using the algorithms found in Volume 4 of the International Oceanographic Tables (UNESCO, 1987). The units for  $\gamma_\theta$  are  $\text{kg m}^{-3}$  and for the specific volume anomaly,  $\delta$ , are  $10^{-8} \text{ m}^3 \text{ kg}^{-1}$ . The reference pressure,  $p_r$ , for potential temperature used to calculate potential density anomaly is the sea surface ( $p_r=0$ ) (UNESCO, 1987). The summation of dynamic height ( $\Sigma\Delta D$ ) is made from the surface and the units are in dynamic meters ( $0.1 \text{ m}^2 \text{ s}^{-2}$ ).

It is noted that small density inversions between the 3 and 15 dbar levels do occasionally show up at some CTD stations. These inversions are likely the result of either horizontal and vertical gradients in the water column or an artifact of the algorithms used to derive salinity from temperature, pressure, and conductivity.

**Table 3.** Data listings at selected pressures of temperature (°C), salinity (PSS), potential density anomaly,  $\gamma_\theta$ , ( $\text{kg m}^{-3}$ ), specific volume anomaly,  $\delta$ , ( $10^{-8} \text{ m}^3 \text{ kg}^{-1}$ ), summation of dynamic height,  $\Sigma\Delta D$ , ( $0.1 \text{ m}^2 \text{ s}^{-2}$ ), and transmissivity (%) for CTD stations occupied during the 22-25 October 1995 cruise aboard the *R/V Pt. Sur*.

**STATION: 1**                      **DATE: 10/22/95**                      **1831 UTC**  
**LAT: 36° 29.2 N.**                      **LON: 122° 07.6 W.**

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.897	33.262	24.657	328.00	0.006	87.2
5.0	14.909	33.271	24.660	327.26	0.015	87.3
10.0	14.866	33.273	24.672	326.34	0.032	87.1
15.0	14.785	33.274	24.690	324.77	0.048	85.7
20.0	14.179	33.273	24.817	312.76	0.064	88.5
25.0	13.063	33.276	25.047	290.97	0.079	89.4
30.0	12.337	33.308	25.213	275.22	0.093	89.4
40.0	11.700	33.453	25.445	253.40	0.120	89.8
50.0	11.295	33.509	25.563	242.42	0.144	90.3
60.0	11.001	33.532	25.634	235.89	0.168	90.5
70.0	10.704	33.582	25.726	227.37	0.191	90.3
80.0	10.541	33.629	25.791	221.37	0.214	90.7
90.0	10.361	33.682	25.863	214.68	0.236	90.8
100.0	10.256	33.728	25.918	209.71	0.257	90.5
120.0	9.793	33.769	26.028	199.56	0.298	90.7
140.0	9.899	33.870	26.090	194.21	0.337	90.4
160.0	9.564	33.863	26.140	189.77	0.376	90.3
180.0	9.291	33.925	26.233	181.24	0.413	90.6
200.0	8.986	33.933	26.289	176.26	0.449	90.7
250.0	8.777	34.083	26.440	162.84	0.533	90.9
300.0	8.132	34.130	26.575	150.64	0.612	91.1
350.0	7.635	34.139	26.656	143.54	0.685	91.2
400.0	7.003	34.158	26.760	133.98	0.755	90.8
450.0	6.611	34.193	26.841	126.76	0.820	91.2
500.0	5.749	34.186	26.945	116.63	0.881	91.1
550.0	5.723	34.236	26.988	113.23	0.938	91.1
600.0	5.419	34.235	27.025	110.00	0.994	91.1
650.0	5.215	34.291	27.094	103.82	1.047	91.0
700.0	4.967	34.319	27.145	99.24	1.098	91.0
750.0	4.767	34.340	27.185	95.72	1.147	91.1
800.0	4.428	34.368	27.244	90.05	1.193	91.1
850.0	4.334	34.406	27.284	86.59	1.237	91.1
900.0	4.147	34.428	27.322	83.16	1.280	91.0
950.0	4.035	34.437	27.341	81.58	1.321	90.0
1000.0	3.917	34.454	27.367	79.34	1.362	89.3
1047.0	3.733	34.475	27.403	75.95	1.398	89.7

STATION: 2  
LAT: 36° 29.3 N.

DATE: 10/22/95  
LON: 122° 03.8 W.

2007 UTC

P (dbar)	T (°C)	S (psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.683	33.295	24.728	320.79	0.010	84.7
5.0	14.673	33.294	24.730	320.66	0.016	84.6
10.0	14.648	33.293	24.734	320.40	0.032	84.8
15.0	14.599	33.295	24.746	319.40	0.048	85.2
20.0	14.160	33.004	24.614	332.10	0.064	87.7
25.0	12.487	33.133	25.049	290.76	0.080	88.6
30.0	11.770	33.239	25.266	270.15	0.094	89.5
40.0	12.000	33.432	25.374	260.20	0.120	89.7
50.0	11.321	33.441	25.505	247.91	0.146	90.3
60.0	10.701	33.482	25.648	234.52	0.170	90.5
70.0	10.417	33.557	25.756	224.44	0.193	90.7
80.0	10.290	33.628	25.834	217.25	0.215	90.6
90.0	10.070	33.670	25.904	210.80	0.236	90.6
100.0	10.192	33.729	25.929	208.62	0.257	90.4
120.0	10.102	33.863	26.049	197.65	0.298	90.3
140.0	9.895	33.900	26.114	191.90	0.337	90.4
160.0	9.317	33.896	26.206	183.43	0.375	90.7
180.1	9.336	33.948	26.244	180.24	0.411	90.7
200.0	8.975	33.975	26.323	173.00	0.446	90.7
250.0	8.453	34.059	26.471	159.73	0.530	90.9
300.0	8.215	34.113	26.550	153.07	0.608	91.1
350.0	7.755	34.134	26.635	145.57	0.682	91.2
400.0	7.400	34.160	26.706	139.40	0.753	91.2
450.0	6.780	34.184	26.811	129.74	0.821	91.2
500.0	6.126	34.190	26.902	121.20	0.884	91.2
550.0	5.613	34.229	26.996	112.31	0.942	91.1
600.0	5.313	34.280	27.073	105.35	0.996	90.9
650.0	4.974	34.323	27.146	98.52	1.047	90.5
700.0	4.583	34.362	27.221	91.40	1.095	90.6
750.0	4.425	34.391	27.262	87.82	1.140	89.3
792.0	4.292	34.410	27.292	85.23	1.176	88.5

STATION: 3  
LAT: 36° 29.6 N.

DATE: 10/22/95  
LON: 122° 02.1 W.

2116 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.567	33.300	24.756	318.09	0.010	84.1
5.0	14.585	33.305	24.756	318.13	0.016	84.0
10.0	14.509	33.298	24.767	317.20	0.032	84.2
15.0	14.469	33.300	24.778	316.38	0.048	84.5
20.0	13.400	33.294	24.993	295.95	0.063	86.4
25.0	12.625	33.282	25.138	282.32	0.077	87.4
30.0	12.010	33.206	25.196	276.82	0.091	89.0
40.0	11.419	33.265	25.352	262.27	0.118	90.0
50.0	10.841	33.326	25.502	248.14	0.144	90.4
60.0	11.000	33.507	25.615	237.71	0.168	90.4
70.0	10.722	33.593	25.731	226.87	0.191	90.4
80.0	10.790	33.656	25.769	223.52	0.214	90.3
90.0	10.634	33.716	25.843	216.66	0.236	90.3
100.0	10.483	33.756	25.900	211.41	0.257	90.0
120.0	10.123	33.814	26.008	201.61	0.299	90.3
140.0	9.804	33.867	26.103	192.87	0.338	90.5
160.0	9.287	33.859	26.182	185.68	0.376	90.7
180.0	9.036	33.899	26.253	179.22	0.412	90.3
200.0	8.869	33.951	26.321	173.13	0.448	90.4
250.0	8.642	34.036	26.424	164.26	0.532	90.8
300.0	8.272	34.123	26.548	153.24	0.611	91.1
350.0	7.480	34.121	26.664	142.60	0.685	91.2
400.0	6.999	34.152	26.755	134.41	0.755	91.2
450.0	6.537	34.183	26.843	126.50	0.820	90.4
500.0	6.116	34.206	26.916	119.86	0.881	90.1
532.0	5.852	34.227	26.965	115.31	0.919	88.7

STATION: 4  
LAT: 36° 29.7 N.

DATE: 10/22/95 2213 UTC  
LON: 122° 00.4 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.351	33.316	24.814	312.53	0.009	83.7
5.0	14.374	33.309	24.804	313.61	0.016	84.2
10.0	14.237	33.300	24.826	311.64	0.031	84.6
15.0	13.831	33.317	24.923	302.49	0.047	86.0
20.0	12.556	33.254	25.129	282.98	0.061	88.3
25.0	11.916	33.222	25.226	273.87	0.075	89.2
30.0	11.446	33.332	25.399	257.55	0.089	89.9
40.0	11.362	33.499	25.543	244.07	0.114	90.3
50.0	10.755	33.470	25.629	236.10	0.138	90.5
60.0	10.465	33.491	25.696	229.94	0.161	90.8
70.0	10.389	33.513	25.727	227.19	0.184	90.8
80.0	10.241	33.608	25.826	217.94	0.206	90.8
90.0	9.827	33.673	25.947	206.62	0.227	90.6
100.0	9.804	33.701	25.972	204.43	0.248	90.3
120.0	9.545	33.778	26.076	195.00	0.288	90.4
140.0	9.382	33.822	26.137	189.56	0.326	90.2
160.0	9.213	33.873	26.205	183.48	0.363	89.9
180.0	9.109	33.894	26.238	180.70	0.400	90.0
200.0	8.878	33.979	26.342	171.17	0.435	90.3
216.0	8.712	34.009	26.392	166.70	0.462	90.4

STATION: 5  
LAT: 36° 29.9 N.

DATE: 10/22/95 2256 UTC  
LON: 121° 58.6 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.022	33.315	24.882	306.05	0.016	84.1
5.0	13.966	33.324	24.901	304.36	0.022	84.1
10.0	12.328	33.412	25.295	266.95	0.037	75.1
15.0	12.005	33.444	25.381	258.91	0.050	80.4
20.0	11.745	33.483	25.460	251.54	0.063	84.3
25.0	11.544	33.480	25.495	248.31	0.075	86.2
30.0	11.279	33.509	25.565	241.71	0.087	87.3
40.0	10.887	33.493	25.623	236.43	0.111	89.2
50.0	10.413	33.599	25.789	220.84	0.134	89.9
60.0	10.307	33.630	25.832	217.02	0.156	89.8
70.0	10.325	33.630	25.829	217.48	0.178	89.8
80.0	10.363	33.615	25.810	219.48	0.199	89.9
90.0	10.214	33.636	25.853	215.65	0.221	90.1
92.0	10.225	33.636	25.851	215.85	0.226	90.1

**STATION: 6**  
**LAT: 36° 30.1 N.**

**DATE: 10/22/95**  
**LON: 121° 57.4 W.**

**2322 UTC**

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	12.698	33.334	25.184	276.60	0.011	77.5
5.0	12.662	33.411	25.230	273.00	0.034	77.6
10.0	12.318	33.448	25.324	264.15	0.047	77.7
15.0	12.047	33.480	25.401	257.03	0.060	80.9
20.0	11.894	33.490	25.437	253.68	0.073	81.6
25.0	11.489	33.510	25.528	245.14	0.085	85.6
30.0	11.414	33.523	25.552	242.97	0.098	85.4
40.0	11.453	33.535	25.555	242.97	0.122	83.4
41.0	11.461	33.534	25.552	243.22	0.124	83.0

**STATION: 7**  
**LAT: 36° 27.0 N.**

**DATE: 10/22/95**  
**LON: 121° 56.6 W.**

**2354 UTC**

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	12.101	33.426	25.349	261.65	0.008	80.8
5.0	12.091	33.433	25.357	260.97	0.013	79.8
10.0	11.931	33.459	25.406	256.38	0.026	80.6
15.0	11.761	33.493	25.464	250.96	0.039	81.4
20.0	11.589	33.523	25.519	245.84	0.051	82.9
25.0	11.576	33.523	25.522	245.68	0.063	83.0
30.0	11.552	33.534	25.535	244.59	0.076	82.9
40.0	11.532	33.534	25.539	244.45	0.100	82.8
44.0	11.444	33.546	25.564	242.16	0.110	83.0

STATION: 8  
LAT: 36° 26.8 N.

DATE: 10/23/95  
LON: 121° 57.6 W.

0012 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	12.240	33.428	25.324	264.05	0.01	82.0
5.0	12.165	33.450	25.355	261.15	0.015	81.8
10.0	11.966	33.456	25.398	257.20	0.028	81.5
15.0	11.793	33.449	25.424	254.80	0.041	82.9
20.0	11.388	33.422	25.478	249.78	0.053	87.0
25.0	11.132	33.435	25.535	244.50	0.066	90.1
30.0	10.981	33.443	25.568	241.45	0.078	90.4
40.0	10.838	33.507	25.643	234.50	0.101	90.6
50.0	10.627	33.581	25.738	225.71	0.125	90.1
60.0	10.373	33.698	25.873	213.06	0.147	88.9
70.0	9.690	33.807	26.074	194.13	0.167	89.3
80.0	9.400	33.861	26.164	185.79	0.186	90.3
90.0	9.338	33.862	26.175	184.92	0.204	90.4
97.0	9.149	33.895	26.231	179.73	0.217	90.5

STATION: 9  
LAT: 36° 26.4 N.

DATE: 10/23/95  
LON: 121° 58.5 W.

0037 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.137	33.396	25.125	275.53	0.010	79.4
5.0	12.697	33.415	25.225	273.48	0.025	77.6
10.0	12.292	33.410	25.300	266.44	0.039	78.2
15.0	12.003	33.410	25.355	261.41	0.052	80.2
20.0	11.377	33.389	25.455	251.95	0.065	88.9
25.0	10.910	33.429	25.570	241.17	0.077	90.5
30.0	10.815	33.519	25.656	233.08	0.089	90.6
40.0	10.645	33.590	25.742	225.13	0.112	90.7
50.0	10.468	33.625	25.800	219.81	0.134	90.6
60.0	10.313	33.662	25.856	214.70	0.156	90.3
70.0	9.917	33.770	26.007	200.49	0.177	89.8
80.0	9.370	33.817	26.134	188.59	0.196	90.7
90.0	9.229	33.834	26.171	185.28	0.215	90.7
100.0	8.884	33.894	26.272	175.79	0.233	90.8
120.0	8.998	33.994	26.333	170.45	0.267	90.6
140.0	8.777	34.019	26.387	165.64	0.301	90.7
160.0	8.522	34.037	26.442	160.82	0.333	90.8
180.0	8.424	34.050	26.467	158.76	0.365	90.9
200.0	8.309	34.063	26.495	156.39	0.397	90.7
227.0	8.075	34.086	26.549	151.74	0.439	90.4



STATION: 10  
LAT: 36° 26.1 N.

DATE: 10/23/95  
LON: 122° 00.0 W.

0231 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.347	33.312	24.812	312.77	0.009	83.7
5.0	14.069	33.317	24.874	306.93	0.016	83.8
10.0	12.857	33.362	25.154	280.35	0.030	81.4
15.0	12.044	33.431	25.364	260.51	0.044	83.9
20.0	11.912	33.458	25.409	256.35	0.057	84.6
25.0	11.835	33.468	25.432	254.31	0.069	85.1
30.0	11.234	33.457	25.533	244.74	0.082	88.1
40.0	10.536	33.508	25.697	229.40	0.106	90.8
50.0	10.420	33.562	25.759	223.73	0.128	90.8
60.0	10.024	33.656	25.900	210.45	0.150	90.7
70.0	9.971	33.701	25.945	206.46	0.171	90.5
80.0	9.918	33.735	25.980	203.30	0.191	90.4
90.0	9.843	33.765	26.016	200.11	0.212	90.5
100.0	9.442	33.816	26.122	190.14	0.231	90.7
120.0	8.855	33.849	26.242	179.06	0.268	90.8
140.0	8.974	33.945	26.299	174.12	0.303	90.6
160.0	8.816	33.975	26.348	169.80	0.338	90.7
180.0	8.727	34.007	26.387	166.44	0.371	90.6
200.0	8.568	34.028	26.428	162.92	0.404	90.7
250.0	7.983	34.097	26.571	150.03	0.483	90.6
300.0	7.362	34.137	26.692	139.08	0.555	90.9
350.0	7.069	34.157	26.749	134.23	0.623	90.7
400.0	6.715	34.168	26.806	129.33	0.689	90.6
450.0	6.382	34.186	26.865	124.21	0.752	89.7
500.0	5.869	34.225	26.961	115.27	0.812	89.8
550.0	5.403	34.277	27.059	106.11	0.867	89.2
564.0	5.323	34.287	27.077	104.50	0.882	89.3

STATION: 11  
LAT: 36° 25.4 N.

DATE: 10/23/95  
LON: 122° 02.5 W.

0321 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.930	33.292	24.672	326.10	0.010	85.0
5.0	14.912	33.288	24.673	326.07	0.016	85.0
10.0	14.835	33.284	24.687	324.90	0.033	84.4
15.0	14.016	33.151	24.757	318.32	0.049	84.3
20.0	12.729	33.186	25.043	291.20	0.064	87.7
25.0	11.958	33.223	25.219	274.54	0.078	89.3
30.0	11.648	33.267	25.311	265.93	0.092	89.7
40.0	11.150	33.268	25.402	257.44	0.118	90.2
50.0	11.235	33.448	25.526	245.89	0.143	90.4
60.0	10.855	33.538	25.665	232.92	0.167	90.6
70.0	10.689	33.657	25.786	221.58	0.190	90.4
80.0	10.586	33.733	25.864	214.42	0.211	90.3
90.0	10.411	33.770	25.923	209.00	0.233	90.2
100.0	10.209	33.806	25.986	203.21	0.253	90.2
120.0	9.984	33.829	26.043	198.24	0.293	90.5
140.0	9.699	33.843	26.102	193.01	0.332	90.7
160.0	9.490	33.925	26.200	183.99	0.370	90.6
180.0	9.209	34.011	26.314	173.57	0.406	90.8
200.0	8.760	33.984	26.364	169.07	0.440	90.9
250.0	8.493	34.082	26.482	158.67	0.522	91.1
300.0	8.103	34.125	26.576	150.50	0.599	90.6
350.0	7.491	34.125	26.665	142.51	0.673	91.0
400.0	6.968	34.163	26.769	133.13	0.742	90.5
450.0	6.361	34.188	26.869	123.78	0.806	90.3
500.0	5.802	34.216	26.962	115.08	0.865	90.7
550.1	5.509	34.257	27.031	108.95	0.922	90.2
600.0	5.285	34.291	27.085	104.19	0.975	90.3
650.0	5.075	34.318	27.131	100.10	1.026	89.7
700.0	4.650	34.366	27.218	91.86	1.074	88.8
701.0	4.628	34.369	27.222	91.43	1.075	89.5

STATION: 12  
LAT: 36° 25.8 N.

DATE: 10/23/95  
LON: 122° 10.9 W.

0445 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_0$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	15.107	33.278	24.623	330.75	0.009	88.0
5.0	15.106	33.277	24.623	330.85	0.019	88.0
10.0	15.115	33.277	24.621	331.15	0.036	88.0
15.0	15.114	33.277	24.621	331.30	0.052	88.0
20.0	15.111	33.276	24.621	331.47	0.069	87.8
25.0	15.011	33.281	24.647	329.14	0.085	87.5
30.0	14.443	33.271	24.761	318.37	0.101	88.1
40.0	12.484	33.338	25.209	275.95	0.131	89.2
50.0	11.318	33.576	25.611	237.83	0.157	90.2
60.0	11.061	33.621	25.692	230.32	0.180	90.5
70.0	10.940	33.646	25.734	226.58	0.203	90.6
80.0	10.744	33.663	25.782	222.24	0.226	90.7
90.0	10.615	33.694	25.829	218.00	0.248	90.8
100.0	10.380	33.741	25.906	210.82	0.269	90.8
120.0	10.178	33.774	25.967	205.43	0.310	90.8
140.0	9.945	33.833	26.053	197.66	0.351	90.8
160.0	9.717	33.888	26.134	190.37	0.390	90.5
180.0	9.316	33.913	26.220	182.49	0.427	90.0
200.0	9.180	33.991	26.303	174.99	0.463	90.3
250.0	8.583	34.081	26.467	160.15	0.547	91.1
300.0	8.166	34.106	26.552	152.84	0.625	91.0
350.0	7.788	34.143	26.637	145.44	0.699	91.2
400.0	7.113	34.153	26.740	135.93	0.770	91.2
450.0	6.552	34.160	26.822	128.44	0.836	91.1
500.0	5.860	34.178	26.925	118.66	0.897	91.1
550.0	5.766	34.228	26.977	114.37	0.956	90.9
600.0	5.327	34.258	27.054	107.11	1.011	91.1
650.0	5.072	34.304	27.120	101.14	1.063	91.1
700.0	4.861	34.326	27.162	97.43	1.113	91.0
750.0	4.677	34.347	27.200	94.14	1.161	91.1
800.0	4.528	34.372	27.237	90.93	1.207	91.0
850.0	4.315	34.395	27.278	87.12	1.252	90.6
900.0	4.241	34.408	27.296	85.76	1.295	90.6
950.0	4.216	34.412	27.303	85.56	1.338	89.6
972.0	4.210	34.414	27.305	85.58	1.356	89.9

STATION: 13  
LAT: 36° 24.3 N.

DATE: 10/23/95  
LON: 122° 06.7 W.

0600 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.964	33.287	24.661	327.16	0.015	86.1
5.0	14.965	33.287	24.661	327.24	0.021	86.0
10.0	14.961	33.286	24.661	327.33	0.038	86.0
15.0	14.880	33.286	24.679	325.78	0.054	86.3
20.0	14.259	33.235	24.771	317.15	0.070	87.3
25.0	12.881	33.181	25.009	294.53	0.085	88.5
30.0	12.748	33.313	25.137	282.48	0.100	89.0
40.0	11.544	33.338	25.385	259.07	0.127	89.9
50.0	11.281	33.453	25.522	246.26	0.152	90.2
60.0	10.852	33.588	25.704	229.21	0.176	89.1
70.0	10.566	33.625	25.783	221.87	0.198	90.5
80.0	10.425	33.658	25.833	217.32	0.220	90.7
90.0	10.276	33.689	25.884	212.74	0.242	90.5
100.0	10.075	33.728	25.949	206.76	0.263	90.7
120.0	10.114	33.846	26.034	199.08	0.303	90.4
140.0	9.784	33.930	26.155	187.95	0.342	90.4
160.0	9.264	33.880	26.202	183.75	0.379	90.8
180.0	9.121	33.961	26.289	175.91	0.415	90.7
200.0	9.109	34.015	26.333	172.10	0.450	90.9
250.0	8.802	34.109	26.455	161.41	0.534	91.1
300.0	8.266	34.130	26.555	152.60	0.612	91.2
350.0	7.523	34.160	26.688	140.41	0.685	91.2
400.0	7.019	34.160	26.759	134.07	0.754	91.2
450.0	6.748	34.182	26.814	129.45	0.820	91.1
500.0	6.355	34.192	26.874	124.08	0.883	90.6
550.0	5.781	34.234	26.980	114.07	0.943	90.4
600.0	5.353	34.278	27.067	105.98	0.998	90.4
650.0	5.102	34.304	27.117	101.45	1.049	90.9
700.0	5.034	34.321	27.139	99.91	1.100	90.2
742.0	4.729	34.355	27.200	94.11	1.141	88.5

STATION: 14  
LAT: 36° 23.2 N.

DATE: 10/23/95  
LON: 122° 01.2 W.

0711 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.366	33.302	24.801	313.84	0.009	84.3
5.0	14.345	33.308	24.809	313.11	0.016	84.2
10.0	13.836	33.336	24.937	301.05	0.031	83.1
15.0	12.229	33.256	25.193	276.75	0.045	88.2
20.0	11.519	33.271	25.337	263.17	0.059	89.6
25.0	11.222	33.332	25.439	253.64	0.072	90.1
30.0	11.301	33.407	25.482	249.60	0.084	90.3
40.0	11.021	33.540	25.636	235.20	0.109	90.5
50.0	10.763	33.666	25.780	221.75	0.132	90.3
60.0	10.564	33.708	25.848	215.49	0.153	90.4
70.0	10.535	33.728	25.869	213.75	0.175	90.4
80.0	10.442	33.753	25.905	210.51	0.196	90.3
90.0	10.259	33.770	25.950	206.48	0.217	90.4
100.0	10.118	33.804	26.000	201.85	0.237	90.6
120.0	9.510	33.841	26.131	189.75	0.277	90.8
140.0	9.514	33.944	26.211	182.61	0.314	90.8
160.0	9.064	33.901	26.251	179.10	0.350	90.8
180.0	8.698	33.878	26.290	175.59	0.385	90.9
200.0	8.790	33.981	26.357	169.75	0.420	90.8
250.0	8.557	34.069	26.463	160.55	0.503	91.0
300.0	7.858	34.097	26.590	149.03	0.580	91.1
350.0	7.277	34.141	26.708	138.29	0.652	90.8
400.0	6.870	34.159	26.778	132.11	0.719	90.6
450.0	6.575	34.175	26.831	127.64	0.784	90.1
500.0	6.259	34.196	26.889	122.53	0.847	89.8
506.0	6.227	34.198	26.895	122.04	0.854	89.8

**STATION: 15**  
**LAT: 36° 22.7 N.**

**DATE: 10/23/95**      **0800 UTC**  
**LON: 121° 59.8 W.**

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.018	33.373	25.129	282.54	0.012	80.6
5.0	13.007	33.368	25.128	282.72	0.018	80.4
10.0	12.886	33.316	25.113	284.31	0.032	81.3
15.0	11.768	33.266	25.287	267.80	0.046	88.7
20.0	11.348	33.341	25.423	255.01	0.059	89.9
25.0	11.294	33.374	25.458	251.81	0.071	90.1
30.0	11.275	33.499	25.558	242.38	0.084	90.2
40.0	11.091	33.523	25.610	237.65	0.108	90.4
50.0	10.782	33.610	25.733	226.22	0.131	89.8
60.0	10.644	33.642	25.783	221.69	0.153	89.3
70.0	10.344	33.681	25.865	214.03	0.175	89.4
80.0	9.949	33.733	25.973	203.98	0.196	89.6
90.0	9.762	33.762	26.027	199.02	0.216	90.4
100.0	9.570	33.837	26.118	190.58	0.236	90.4
120.0	9.323	33.854	26.172	185.85	0.273	90.3
140.0	9.055	33.944	26.285	175.44	0.309	90.4
160.0	9.006	33.998	26.335	171.06	0.344	90.5
180.0	8.849	34.013	26.373	167.87	0.378	90.5
200.0	8.584	34.026	26.424	163.30	0.411	90.5
211.0	8.389	34.049	26.472	158.87	0.428	90.3

**STATION: 16**  
**LAT: 36° 22.2 N.**

**DATE: 10/23/95**      **0832 UTC**  
**LON: 121° 58.5 W.**

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	12.516	33.345	25.207	275.25	0.006	83.1
5.0	12.534	33.349	25.207	275.22	0.014	82.8
10.0	11.914	33.283	25.273	269.03	0.027	86.7
15.0	11.551	33.320	25.369	260.02	0.041	83.3
20.0	11.519	33.335	25.387	258.45	0.054	85.6
25.0	11.212	33.450	25.531	244.80	0.066	87.1
30.0	11.133	33.527	25.606	237.86	0.078	89.3
40.0	10.962	33.593	25.688	230.24	0.102	89.2
50.0	10.840	33.618	25.729	226.58	0.124	89.4
60.0	10.637	33.635	25.778	222.12	0.147	89.6
70.0	10.505	33.667	25.827	217.74	0.169	89.4
80.0	9.837	33.776	26.025	199.01	0.190	89.4
90.0	9.795	33.789	26.043	197.57	0.210	89.2
100.0	9.682	33.779	26.054	196.67	0.229	88.8
106.0	9.660	33.791	26.067	195.54	0.241	89.2

**STATION: 17**  
**LAT: 36° 21.5 N.**

**DATE: 10/23/95**  
**LON: 121° 55.8 W.**

**0908 UTC**

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	12.504	33.438	25.281	268.10	0.008	81.3
5.0	12.439	33.431	25.288	267.52	0.014	81.4
10.0	12.130	33.468	25.375	259.31	0.027	81.5
15.0	11.922	33.490	25.432	254.01	0.040	82.6
20.0	11.910	33.490	25.434	253.95	0.052	82.8
25.0	11.839	33.498	25.454	252.23	0.065	83.3
30.0	11.784	33.504	25.469	250.88	0.077	83.6
40.0	11.577	33.522	25.522	246.13	0.102	84.4
50.0	11.252	33.539	25.594	239.45	0.127	83.4

**STATION: 18**  
**LAT: 36° 15.2 N.**

**DATE: 10/23/95**  
**LON: 121° 53.4 W.**

**1020 UTC**

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.313	33.394	25.087	286.70	0.009	80.0
5.0	13.317	33.395	25.087	286.61	0.015	80.2
10.0	13.286	33.391	25.091	286.39	0.030	79.2
15.0	13.242	33.401	25.107	285.01	0.044	81.6
20.0	13.090	33.422	25.154	280.66	0.058	83.7
25.0	12.527	33.487	25.315	265.49	0.072	86.2
30.0	12.125	33.502	25.403	257.16	0.085	88.1
40.0	11.904	33.529	25.466	251.43	0.110	87.4
41.0	11.877	33.524	25.467	251.35	0.113	87.1

**STATION: 19**  
**LAT: 36° 14.2 N.**

**DATE: 10/23/95**  
**LON: 121° 53.6 W.**

**1044 UTC**

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.297	33.370	25.073	287.90	0.009	84.2
5.0	13.274	33.352	25.064	288.86	0.014	84.1
10.0	12.933	33.363	25.140	281.76	0.029	85.2
15.0	12.825	33.485	25.255	270.92	0.043	85.9
20.0	12.295	33.494	25.364	260.61	0.056	88.2
25.0	12.204	33.499	25.386	258.71	0.069	87.8
30.0	12.085	33.498	25.408	256.70	0.082	88.1
40.0	11.419	33.549	25.572	241.36	0.107	89.2
50.0	11.289	33.587	25.625	236.55	0.130	88.2
60.0	11.065	33.624	25.694	230.15	0.154	85.9
70.0	10.680	33.695	25.818	218.62	0.176	88.2
80.0	10.380	33.752	25.914	209.62	0.198	88.4
89.0	10.177	33.795	25.983	203.25	0.216	89.3

STATION: 20  
LAT: 36° 13.7 N.

DATE: 10/23/95  
LON: 121° 54.3 W.

1105 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.088	33.363	25.109	284.52	0.009	85.8
5.0	13.086	33.362	25.109	284.57	0.014	85.9
10.0	12.920	33.369	25.147	281.08	0.028	86.2
15.0	11.945	33.451	25.397	257.35	0.042	87.3
20.0	11.699	33.468	25.456	251.86	0.055	88.9
25.0	11.645	33.481	25.477	250.03	0.067	89.3
30.0	11.654	33.492	25.484	249.46	0.080	89.2
40.0	11.325	33.564	25.600	238.65	0.104	88.7
50.0	11.006	33.636	25.714	228.03	0.127	88.8
60.0	10.913	33.651	25.743	225.55	0.150	88.4
70.0	10.700	33.692	25.812	219.13	0.172	89.1
80.0	10.394	33.750	25.911	209.96	0.194	89.5
90.0	10.181	33.789	25.978	203.78	0.214	90.2
100.0	10.087	33.808	26.009	201.01	0.235	89.6
120.0	9.820	33.867	26.100	192.80	0.274	90.2
140.0	9.561	33.927	26.190	184.56	0.312	89.9
160.0	9.080	34.011	26.334	171.22	0.347	89.9
180.0	8.719	34.052	26.423	163.03	0.381	89.8
200.0	8.481	34.058	26.465	159.35	0.413	90.1
250.0	8.017	34.053	26.531	153.77	0.491	89.7
258.0	7.856	34.066	26.565	150.60	0.503	89.1



STATION: 21  
LAT: 36° 12.9 N.

DATE: 10/23/95  
LON: 121° 54.6 W.

1133 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.106	33.364	25.106	284.78	0.009	84.3
5.0	13.017	33.370	25.128	282.71	0.014	84.7
10.0	12.689	33.400	25.216	274.50	0.028	86.6
15.0	12.022	33.446	25.379	259.08	0.041	88.2
20.0	11.416	33.499	25.533	244.58	0.054	89.3
25.0	11.231	33.545	25.602	238.11	0.066	89.7
30.0	11.162	33.574	25.637	234.89	0.078	89.7
40.0	11.040	33.599	25.679	231.14	0.101	90.0
50.0	10.820	33.648	25.756	224.00	0.124	90.2
60.0	10.696	33.671	25.796	220.40	0.146	90.3
70.0	10.561	33.702	25.844	216.10	0.168	90.1
80.0	10.466	33.729	25.882	212.68	0.190	90.3
90.0	10.207	33.772	25.961	205.42	0.211	90.6
100.0	9.859	33.857	26.085	193.73	0.230	90.6
120.0	9.557	33.918	26.183	184.79	0.268	90.7
140.0	9.123	33.935	26.267	177.16	0.305	90.8
160.0	8.618	33.917	26.332	171.20	0.339	90.9
180.0	8.672	33.984	26.377	167.35	0.373	90.6
200.0	8.563	34.060	26.454	160.40	0.406	90.8
250.0	7.890	34.055	26.552	151.73	0.484	90.3
300.0	7.503	34.098	26.642	143.84	0.558	89.4
350.0	7.062	34.104	26.709	137.99	0.628	89.6
400.0	6.659	34.068	26.736	135.95	0.697	89.2
450.0	6.259	34.184	26.880	122.71	0.762	89.4
476.0	6.137	34.199	26.907	120.38	0.794	88.2

STATION: 22  
LAT: 36° 12.0 N.

DATE: 10/23/95  
LON: 121° 54.9 W.

1211 UTC

P (dbar)	T (°C)	S (psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	12.835	33.382	25.173	278.37	0.015	85.6
5.0	12.826	33.383	25.176	278.16	0.021	85.9
10.0	12.728	33.386	25.197	276.27	0.035	86.1
15.0	12.337	33.430	25.306	266.00	0.048	87.5
20.0	11.462	33.516	25.537	244.13	0.061	89.2
25.0	11.256	33.550	25.601	238.18	0.073	89.2
30.0	11.235	33.594	25.640	234.65	0.085	89.6
40.0	11.047	33.617	25.691	229.94	0.108	89.8
50.0	10.818	33.662	25.768	222.90	0.131	89.4
60.0	10.716	33.682	25.801	219.97	0.153	90.1
70.0	10.460	33.717	25.873	213.30	0.175	89.7
80.0	10.205	33.771	25.960	205.30	0.196	90.4
90.0	10.075	33.798	26.003	201.40	0.216	90.5
100.0	9.839	33.865	26.095	192.83	0.236	90.6
120.0	9.506	33.923	26.196	183.60	0.273	90.7
140.0	9.129	33.943	26.272	176.66	0.309	90.8
160.0	8.487	33.927	26.361	168.45	0.344	90.9
180.0	8.325	33.975	26.423	162.86	0.377	91.0
200.0	8.420	34.067	26.481	157.82	0.409	91.0
250.0	7.601	34.073	26.608	146.30	0.485	90.0
300.0	7.439	34.104	26.655	142.57	0.557	89.6
350.0	7.177	34.132	26.715	137.55	0.627	89.9
400.0	6.836	34.147	26.775	132.41	0.695	90.2
450.0	6.278	34.192	26.883	122.38	0.758	90.2
500.0	5.864	34.235	26.970	114.47	0.818	89.7
550.0	5.558	34.272	27.037	108.45	0.873	89.2
600.0	5.338	34.300	27.086	104.16	0.927	89.3
650.0	5.187	34.326	27.125	100.88	0.978	88.6
700.0	4.977	34.344	27.164	97.47	1.028	88.4
750.0	4.820	34.360	27.194	94.91	1.076	87.5
800.0	4.631	34.382	27.233	91.46	1.122	87.2
850.0	4.192	34.430	27.319	83.09	1.165	83.8
866.0	4.190	34.432	27.320	83.09	1.179	83.6

STATION: 23  
LAT: 36° 08.9 N.

DATE: 10/23/95  
LON: 121° 55.8 W.

1317 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.207	33.368	25.089	286.38	0.011	85.6
5.0	13.206	33.369	25.090	286.35	0.017	84.7
10.0	13.202	33.369	25.091	286.37	0.031	85.7
15.0	13.168	33.369	25.098	285.86	0.045	85.8
20.0	13.112	33.371	25.110	284.80	0.060	86.2
25.0	12.648	33.425	25.244	272.22	0.074	86.4
30.0	12.272	33.459	25.342	262.99	0.087	86.3
40.0	11.292	33.578	25.617	237.04	0.112	88.8
50.0	10.970	33.657	25.737	225.87	0.135	90.3
60.0	10.676	33.697	25.820	218.19	0.157	90.4
70.0	10.392	33.730	25.895	211.20	0.179	90.5
80.0	10.172	33.780	25.972	204.10	0.199	90.7
90.0	9.995	33.805	26.022	199.60	0.220	90.7
100.0	9.605	33.815	26.094	192.81	0.239	90.7
120.0	9.419	33.888	26.182	184.85	0.277	90.8
140.0	9.194	33.961	26.276	176.34	0.313	90.8
160.0	8.845	33.957	26.329	171.61	0.348	90.8
180.0	8.219	33.956	26.424	162.71	0.382	90.8
200.0	8.148	34.034	26.496	156.23	0.413	90.9
250.0	7.673	34.066	26.592	147.87	0.489	91.1
300.0	7.161	34.099	26.691	138.99	0.561	90.6
350.0	6.688	34.120	26.773	131.71	0.629	90.6
400.0	6.481	34.171	26.839	126.00	0.693	90.4
450.0	6.214	34.196	26.894	121.28	0.755	90.5
500.0	5.867	34.218	26.956	115.79	0.814	91.0
550.0	5.607	34.265	27.025	109.58	0.871	90.5
600.0	5.334	34.296	27.084	104.37	0.924	90.7
650.0	5.152	34.323	27.126	100.70	0.975	90.0
700.0	4.932	34.350	27.174	96.49	1.025	89.7
750.0	4.742	34.375	27.215	92.83	1.072	89.7
800.0	4.567	34.395	27.250	89.73	1.118	89.8
850.0	4.359	34.417	27.290	86.08	1.162	89.3
900.0	4.146	34.439	27.331	82.35	1.204	89.3
950.0	3.980	34.462	27.367	79.07	1.244	88.8
951.0	3.986	34.454	27.360	79.73	1.245	89.0

STATION: 24  
LAT: 36° 10.1 N.

DATE: 10/23/95 1421 UTC  
LON: 121° 59.6 W.

P (dbar)	T (°C)	S (psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	11.999	33.470	25.402	256.60	0.013	83.7
5.0	12.000	33.472	25.403	256.55	0.018	83.9
10.0	11.929	33.475	25.419	255.18	0.031	84.2
15.0	11.845	33.478	25.437	253.55	0.043	84.5
20.0	11.832	33.482	25.443	253.12	0.056	84.5
25.0	11.798	33.491	25.456	251.98	0.069	84.8
30.0	11.769	33.497	25.466	251.14	0.081	85.7
40.0	11.684	33.509	25.491	249.00	0.106	86.5
50.0	11.357	33.631	25.646	234.49	0.130	89.1
60.0	10.897	33.694	25.779	222.09	0.153	89.6
70.0	10.566	33.731	25.866	213.99	0.175	89.9
80.0	10.238	33.770	25.953	205.95	0.196	90.5
90.0	9.990	33.774	25.999	201.78	0.216	90.6
100.0	9.909	33.808	26.039	198.18	0.236	90.5
120.0	9.614	33.896	26.157	187.31	0.275	90.6
140.0	9.046	33.951	26.292	174.75	0.311	90.8
160.0	8.813	33.969	26.343	170.24	0.346	90.8
180.0	8.580	33.980	26.388	166.30	0.379	91.0
200.0	7.958	33.990	26.490	156.72	0.412	91.0
250.0	7.587	34.065	26.603	146.73	0.488	90.4
300.0	7.181	34.090	26.681	140.00	0.559	90.5
350.0	6.889	34.146	26.766	132.54	0.627	90.2
400.0	6.500	34.170	26.837	126.26	0.692	90.6
450.0	6.049	34.204	26.922	118.47	0.753	91.0
500.0	5.772	34.236	26.982	113.19	0.811	90.9
550.0	5.585	34.270	27.032	108.92	0.867	90.8
600.0	5.302	34.298	27.088	103.89	0.920	90.8
650.0	5.078	34.331	27.141	99.21	0.971	90.8
700.0	4.838	34.359	27.191	94.65	1.019	90.2
750.0	4.685	34.381	27.226	91.69	1.066	90.4
800.0	4.425	34.404	27.273	87.36	1.110	90.2
850.0	4.297	34.418	27.298	85.26	1.153	90.5
900.0	4.048	34.447	27.347	80.57	1.195	89.9
950.0	3.885	34.463	27.377	77.90	1.235	89.9
988.0	3.809	34.472	27.392	76.62	1.264	89.1

STATION: 25  
LAT: 36° 11.5 N.

DATE: 10/23/95  
LON: 121° 58.5 W.

1514 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	12.519	33.433	25.274	268.76	0.019	82.9
5.0	12.472	33.439	25.288	267.46	0.025	83.2
10.0	12.107	33.471	25.382	258.70	0.038	82.8
15.0	11.867	33.467	25.424	254.77	0.051	85.2
20.0	11.406	33.509	25.542	243.65	0.063	89.2
25.0	11.347	33.538	25.575	240.64	0.075	89.4
30.0	11.213	33.590	25.640	234.60	0.087	89.7
40.0	11.068	33.627	25.695	229.57	0.110	89.9
50.0	10.816	33.659	25.765	223.14	0.133	90.1
60.0	10.781	33.688	25.794	220.63	0.155	89.8
70.0	10.590	33.722	25.855	215.04	0.177	90.1
80.0	10.545	33.754	25.888	212.16	0.198	89.7
90.0	10.321	33.774	25.942	207.22	0.219	90.4
100.0	10.159	33.803	25.993	202.60	0.240	90.5
120.0	9.640	33.869	26.132	189.72	0.279	90.8
140.0	9.254	33.942	26.251	178.68	0.316	90.8
160.0	8.384	33.909	26.362	168.27	0.350	91.0
180.0	8.323	33.997	26.441	161.21	0.384	90.9
200.0	8.262	34.047	26.489	156.95	0.415	90.9
250.0	7.526	34.048	26.599	147.12	0.491	90.9
300.0	7.233	34.104	26.684	139.72	0.563	90.2
350.1	6.886	34.143	26.763	132.80	0.631	90.1
400.0	6.448	34.180	26.852	124.82	0.696	90.4
450.0	6.106	34.201	26.912	119.46	0.757	90.6
500.0	5.831	34.237	26.976	113.85	0.815	90.3
550.0	5.507	34.276	27.046	107.52	0.870	90.7
600.0	5.222	34.313	27.110	101.72	0.923	89.9
650.0	4.982	34.347	27.165	96.84	0.972	90.3
700.0	4.789	34.367	27.203	93.46	1.020	89.6
725.0	4.738	34.371	27.212	92.81	1.043	88.6

STATION: 26  
LAT: 36° 13.1 N.

DATE: 10/23/95 1559 UTC  
LON: 121° 58.1 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.106	33.374	25.113	284.07	0.011	81.6
5.0	13.073	33.366	25.114	284.03	0.016	81.7
10.0	12.812	33.375	25.173	278.61	0.031	84.4
15.0	11.878	33.472	25.426	254.57	0.044	88.6
20.0	11.396	33.500	25.537	244.16	0.056	89.4
25.0	11.338	33.506	25.552	242.81	0.068	89.4
30.0	11.183	33.561	25.623	236.21	0.080	89.8
40.0	11.041	33.607	25.685	230.58	0.104	89.9
50.0	10.895	33.658	25.751	224.53	0.127	90.1
60.0	10.704	33.674	25.797	220.35	0.149	90.1
70.0	10.568	33.708	25.848	215.75	0.171	90.0
80.0	10.337	33.750	25.920	209.03	0.192	89.9
90.0	10.142	33.786	25.982	203.39	0.213	90.5
100.0	10.059	33.800	26.008	201.16	0.233	90.5
120.1	9.809	33.870	26.104	192.37	0.272	90.7
140.0	9.196	33.926	26.249	178.93	0.309	90.8
160.0	9.031	34.009	26.340	170.59	0.344	90.1
180.0	8.928	34.034	26.377	167.53	0.378	90.6
200.0	8.719	34.071	26.438	161.98	0.411	90.7
250.0	8.002	34.040	26.523	154.50	0.490	90.6
300.0	7.600	34.097	26.628	145.29	0.565	90.0
350.0	6.859	34.149	26.772	131.95	0.634	89.6
400.1	6.444	34.176	26.849	125.07	0.699	89.9
450.0	6.055	34.215	26.930	117.77	0.760	89.4
484.0	5.748	34.248	26.994	111.83	0.799	87.8

**STATION: 27**  
**LAT: 36° 13.9 N.**

**DATE: 10/23/95**  
**LON: 121° 57.5 W.**

**1631 UTC**

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.146	33.368	25.101	285.26	0.012	85.5
5.0	13.094	33.363	25.108	284.64	0.018	85.7
10.0	12.546	33.401	25.244	271.82	0.032	85.7
15.0	12.110	33.416	25.339	262.89	0.045	88.0
20.0	11.620	33.469	25.472	250.40	0.058	88.9
25.0	11.316	33.519	25.567	241.47	0.070	89.4
30.0	11.186	33.563	25.624	236.10	0.082	89.8
40.0	11.077	33.610	25.680	230.99	0.105	89.3
50.0	10.961	33.637	25.722	227.23	0.128	89.8
60.0	10.786	33.675	25.784	221.62	0.151	89.9
70.0	10.472	33.734	25.884	212.25	0.172	89.7
80.0	10.268	33.768	25.947	206.55	0.193	88.9
90.0	10.138	33.791	25.987	202.94	0.214	89.5
100.0	9.988	33.827	26.040	198.02	0.234	89.2
120.0	9.635	33.909	26.163	186.73	0.272	90.6
140.0	9.545	33.916	26.184	185.13	0.310	90.3
152.0	9.456	33.927	26.208	183.13	0.332	89.9

**STATION: 28**  
**LAT: 36° 14.6 N.**

**DATE: 10/23/95**  
**LON: 121° 57.1 W.**

**1654 UTC**

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.161	33.361	25.093	286.05	0.016	85.9
5.0	13.147	33.358	25.093	286.04	0.022	85.3
10.0	13.091	33.360	25.106	284.91	0.036	85.4
15.0	12.986	33.359	25.126	283.18	0.050	83.3
20.0	12.578	33.382	25.223	274.05	0.064	86.8
25.0	11.738	33.430	25.420	255.43	0.077	88.9
30.0	11.575	33.479	25.488	249.06	0.090	89.0
40.0	11.268	33.551	25.600	238.63	0.114	89.5
50.0	11.126	33.604	25.668	232.45	0.138	87.7
60.0	10.729	33.688	25.804	219.71	0.160	88.8
70.0	10.685	33.684	25.808	219.51	0.182	88.1
80.0	10.457	33.728	25.883	212.63	0.204	88.6
90.0	10.125	33.788	25.986	202.97	0.225	89.4
91.0	9.964	33.763	25.994	202.22	0.227	89.5

**STATION: 29**  
**LAT: 36° 17.7 N.**

**DATE: 10/23/95**      **1728 UTC**  
**LON: 121° 57.6 W.**

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.236	33.375	25.089	286.41	0.010	82.0
5.0	12.897	33.422	25.192	276.67	0.016	82.2
10.0	12.199	33.389	25.301	266.40	0.030	85.3
15.0	11.584	33.517	25.516	246.08	0.043	88.0
20.0	11.542	33.518	25.524	245.38	0.055	88.3
25.0	11.513	33.518	25.530	244.98	0.067	88.2
30.0	11.480	33.521	25.538	244.30	0.079	88.0
40.0	11.442	33.540	25.560	242.44	0.104	87.2
50.0	10.954	33.626	25.715	227.94	0.127	88.0
60.0	10.714	33.663	25.787	221.34	0.150	88.7
63.0	10.696	33.665	25.791	220.96	0.157	88.7

**STATION: 30**  
**LAT: 36° 18.3 N.**

**DATE: 10/23/95**      **1807 UTC**  
**LON: 122° 01.2 W.**

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	12.320	33.363	25.259	270.24	0.018	80.8
5.0	12.211	33.363	25.279	268.35	0.023	80.4
10.0	12.026	33.391	25.336	263.06	0.037	81.3
15.0	11.997	33.424	25.366	260.30	0.050	80.3
20.0	11.819	33.459	25.428	254.59	0.063	82.3
25.0	11.357	33.523	25.563	241.86	0.075	86.5
30.0	11.060	33.570	25.653	233.38	0.087	88.5
40.0	10.828	33.647	25.754	224.00	0.110	89.7
50.0	10.704	33.654	25.781	221.59	0.132	89.8
60.0	10.652	33.664	25.798	220.22	0.154	89.7
70.0	10.632	33.669	25.806	219.70	0.176	89.8
80.0	10.613	33.672	25.812	219.38	0.198	89.8
90.0	10.134	33.772	25.973	204.26	0.219	89.1
100.0	9.800	33.821	26.067	195.47	0.240	89.6
101.0	9.783	33.827	26.074	194.78	0.242	89.7



STATION: 31  
LAT: 36° 18.9 N.

DATE: 10/23/95  
LON: 122° 04.6 W.

1842 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.136	33.307	24.852	308.94	0.009	82.6
5.0	14.030	33.313	24.879	306.41	0.015	82.9
10.0	13.898	33.302	24.898	304.75	0.031	83.3
15.0	13.330	33.264	24.984	296.67	0.046	85.7
20.0	12.960	33.268	25.061	289.52	0.060	86.0
25.0	12.255	33.231	25.169	279.29	0.075	88.4
30.0	12.150	33.254	25.207	275.82	0.089	88.6
40.0	11.321	33.298	25.394	258.20	0.115	90.1
50.0	11.198	33.397	25.494	248.91	0.141	90.2
60.0	11.215	33.449	25.531	245.67	0.165	90.4
70.0	10.936	33.494	25.616	237.82	0.190	90.5
80.0	10.391	33.589	25.785	221.85	0.213	90.6
90.0	10.159	33.705	25.916	209.63	0.234	90.4
100.0	10.034	33.753	25.975	204.22	0.255	90.4
120.0	9.594	33.806	26.090	193.68	0.294	90.4
140.0	8.878	33.957	26.323	171.74	0.331	90.3
160.0	8.852	33.972	26.340	170.58	0.365	90.3
180.0	8.873	33.963	26.330	171.94	0.399	90.3
197.0	8.710	33.995	26.381	167.38	0.428	90.6

STATION: 32  
LAT: 36° 19.6 N.

DATE: 10/23/95 1914 UTC  
LON: 122° 07.3 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.988	33.279	24.650	328.22	0.013	84.8
5.0	14.898	33.292	24.679	325.49	0.020	84.8
10.0	14.799	33.277	24.689	324.68	0.036	85.8
15.0	14.050	33.239	24.818	312.50	0.052	87.6
20.0	12.855	33.201	25.030	292.45	0.067	88.6
25.0	12.462	33.323	25.201	276.28	0.081	89.1
30.0	12.222	33.349	25.267	270.09	0.095	89.3
40.0	11.317	33.380	25.458	252.12	0.121	90.1
50.0	11.088	33.459	25.561	242.54	0.146	90.2
60.0	11.174	33.595	25.652	234.16	0.170	88.9
70.0	10.850	33.621	25.730	226.96	0.193	89.1
80.0	10.691	33.682	25.806	219.92	0.215	89.9
90.0	10.402	33.712	25.880	213.09	0.237	89.2
100.0	10.285	33.788	25.959	205.77	0.258	90.3
120.0	10.118	33.815	26.009	201.45	0.298	90.3
140.0	9.699	33.907	26.152	188.24	0.337	90.4
160.0	9.506	33.924	26.197	184.29	0.375	90.6
180.0	9.285	33.949	26.253	179.38	0.411	90.6
200.0	9.114	34.055	26.363	169.26	0.446	90.9
250.0	8.345	34.121	26.536	153.56	0.527	91.1
300.0	7.937	34.093	26.575	150.45	0.603	90.5
350.0	7.736	34.104	26.614	147.58	0.677	90.4
400.0	6.958	34.159	26.766	133.34	0.747	90.8
450.0	6.515	34.180	26.843	126.42	0.812	90.8
500.0	6.346	34.186	26.870	124.40	0.875	90.3
539.0	5.655	34.244	27.003	111.57	0.920	89.8

STATION: 33  
LAT: 36° 20.2 N.

DATE: 10/23/95  
LON: 122° 09.5 W.

1955 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	15.117	33.276	24.620	331.08	0.013	86.8
5.0	15.077	33.278	24.629	330.20	0.020	86.3
10.0	14.998	33.275	24.645	328.89	0.036	86.1
15.0	14.845	33.272	24.675	326.14	0.053	86.9
20.0	14.516	33.272	24.746	319.57	0.069	87.8
25.0	14.142	33.271	24.824	312.24	0.085	88.3
30.0	13.001	33.303	25.080	287.94	0.100	88.6
40.0	11.976	33.437	25.381	259.51	0.127	89.5
50.0	11.201	33.486	25.562	242.47	0.152	89.9
60.0	11.085	33.582	25.658	233.58	0.176	90.3
70.0	10.770	33.637	25.757	224.38	0.199	90.6
80.0	10.344	33.708	25.886	212.27	0.221	90.7
90.0	10.114	33.783	25.984	203.14	0.242	90.8
100.0	10.038	33.802	26.013	200.68	0.262	90.8
120.0	9.797	33.857	26.097	193.09	0.301	90.8
140.0	9.602	33.942	26.195	184.15	0.339	90.7
160.0	9.228	33.949	26.262	178.11	0.375	90.8
180.0	8.909	33.973	26.332	171.76	0.410	90.7
200.0	9.005	34.017	26.351	170.33	0.444	90.9
250.0	8.813	34.102	26.448	162.05	0.527	91.1
300.0	8.035	34.121	26.583	149.80	0.605	91.1
350.0	7.301	34.134	26.699	139.13	0.678	91.2
400.0	7.000	34.152	26.755	134.41	0.746	90.7
450.0	6.497	34.177	26.843	126.39	0.811	90.7
500.0	5.787	34.221	26.968	114.54	0.871	90.5
550.0	5.450	34.251	27.034	108.58	0.927	91.0
600.0	5.148	34.298	27.107	101.95	0.980	90.3
650.0	5.007	34.330	27.149	98.36	1.030	90.6
700.0	4.907	34.342	27.170	96.79	1.079	90.6
750.0	4.769	34.362	27.202	94.11	1.126	90.6
764.0	4.718	34.365	27.210	93.44	1.139	90.4

STATION: 34  
LAT: 36° 21.3 N.

DATE: 10/23/95  
LON: 122° 13.8 W.

2054 UTC

P (dbar)	T (°C)	S (psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	15.241	33.279	24.594	333.48	0.007	86.6
5.0	14.939	33.273	24.656	327.71	0.017	87.3
10.0	14.698	33.273	24.708	322.88	0.033	87.9
15.0	13.944	33.343	24.920	302.80	0.049	88.0
20.0	12.593	33.381	25.220	274.39	0.063	88.6
25.0	12.429	33.405	25.271	269.64	0.077	88.8
30.0	12.077	33.441	25.365	260.76	0.090	89.5
40.0	11.617	33.549	25.535	244.86	0.115	89.1
50.0	11.232	33.600	25.645	234.60	0.139	90.2
60.0	11.107	33.614	25.679	231.60	0.162	90.5
70.0	11.013	33.621	25.701	229.72	0.185	90.5
80.0	10.839	33.648	25.754	224.94	0.208	90.6
90.0	10.656	33.676	25.808	220.03	0.230	90.7
100.0	10.264	33.663	25.866	214.67	0.252	90.5
120.0	9.886	33.700	25.958	206.21	0.294	90.2
140.0	9.735	33.800	26.062	196.77	0.335	90.3
160.0	9.508	33.891	26.171	186.76	0.373	90.5
180.0	9.257	33.932	26.244	180.17	0.410	90.6
200.0	9.117	33.995	26.316	173.74	0.445	90.8
250.0	8.505	34.062	26.466	160.26	0.529	90.9
300.0	7.911	34.136	26.612	146.94	0.605	91.1
350.0	7.288	34.146	26.711	138.06	0.677	91.1
400.0	6.531	34.157	26.822	127.65	0.743	91.0
450.0	6.030	34.167	26.895	121.02	0.805	91.1
500.0	5.886	34.213	26.950	116.40	0.864	91.1
550.0	5.624	34.229	26.995	112.42	0.922	91.0
600.0	5.333	34.258	27.053	107.22	0.977	90.9
650.0	5.255	34.279	27.079	105.26	1.030	90.9
700.0	4.955	34.319	27.146	99.06	1.081	90.9
750.0	4.736	34.338	27.186	95.51	1.130	90.3
800.0	4.583	34.359	27.220	92.56	1.176	89.8
850.0	4.322	34.393	27.276	87.39	1.222	89.6
900.0	4.090	34.419	27.321	83.09	1.264	90.0
950.0	3.881	34.447	27.365	79.01	1.305	89.9
1000.0	3.693	34.469	27.402	75.57	1.343	90.3
1029.0	3.610	34.479	27.418	74.13	1.365	90.1

STATION: 35  
LAT: 36° 17.4 N.

DATE: 10/23/95  
LON: 122° 15.6 W.

2209 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	15.153	33.279	24.613	331.67	0.010	84.7
5.0	14.763	33.293	24.709	322.61	0.017	84.6
10.0	14.063	33.281	24.848	309.57	0.032	85.5
15.0	12.885	33.233	25.049	290.51	0.047	87.4
20.0	11.884	33.221	25.231	273.30	0.062	88.9
25.0	11.943	33.312	25.291	267.69	0.075	89.3
30.0	11.466	33.366	25.421	255.45	0.088	89.8
40.0	11.212	33.510	25.579	240.68	0.113	90.3
50.0	10.934	33.530	25.644	234.68	0.137	90.3
60.0	10.570	33.616	25.776	222.37	0.160	90.6
70.0	10.228	33.630	25.846	215.90	0.182	90.6
80.0	10.216	33.690	25.894	211.50	0.203	90.7
90.0	10.197	33.763	25.955	205.94	0.224	90.7
100.0	10.014	33.805	26.018	200.12	0.244	90.8
120.0	9.777	33.863	26.104	192.35	0.283	90.8
140.0	9.458	33.881	26.171	186.34	0.321	90.6
160.0	9.366	33.932	26.226	181.51	0.358	90.7
180.0	9.255	33.958	26.265	178.20	0.394	90.7
200.0	9.100	34.005	26.327	172.71	0.429	90.8
250.0	8.793	34.076	26.431	163.66	0.513	91.0
300.0	8.420	34.157	26.553	152.94	0.592	91.2
350.0	7.196	34.140	26.719	137.18	0.665	91.0
400.0	6.723	34.153	26.793	130.57	0.732	91.2
450.0	6.061	34.160	26.885	121.96	0.795	91.1
500.0	5.931	34.210	26.942	117.19	0.855	91.1
550.0	5.661	34.226	26.988	113.15	0.912	91.1
600.0	5.367	34.233	27.029	109.50	0.968	90.6
650.0	5.168	34.280	27.091	104.06	1.021	91.1
700.0	4.938	34.310	27.141	99.55	1.072	90.5
750.0	4.624	34.355	27.212	92.92	1.120	90.3
800.0	4.354	34.393	27.272	87.30	1.165	89.9
850.0	4.222	34.412	27.301	84.76	1.208	90.3
900.0	4.129	34.424	27.321	83.24	1.250	90.3
950.0	3.841	34.459	27.379	77.64	1.291	90.2
968.0	3.735	34.471	27.399	75.68	1.304	89.8

STATION: 36  
LAT: 36° 17.1 N.

DATE: 10/23/95 2345 UTC  
LON: 122° 09.4 W.

P(dbar)	T(°C)	S(psu)	$\gamma_0$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	15.313	33.271	24.573	335.56	0.010	84.6
5.0	15.283	33.266	24.601	332.93	0.017	84.6
10.0	14.620	33.262	24.716	322.11	0.033	85.3
15.0	13.076	33.168	24.961	298.92	0.049	87.1
20.0	12.219	33.168	25.127	283.19	0.063	87.8
25.0	12.080	33.191	25.171	279.09	0.078	88.5
30.0	12.307	33.365	25.263	270.47	0.091	88.9
40.0	11.491	33.331	25.389	258.70	0.118	89.9
50.0	11.272	33.558	25.605	238.39	0.142	89.1
60.0	10.957	33.640	25.726	227.16	0.166	89.4
70.0	10.705	33.692	25.811	219.23	0.188	90.0
80.0	10.502	33.726	25.873	213.57	0.210	89.9
90.0	10.292	33.790	25.960	205.53	0.231	90.0
100.0	10.205	33.781	25.968	204.95	0.251	90.3
120.0	9.996	33.845	26.054	197.21	0.291	90.3
140.0	9.736	33.896	26.137	189.65	0.330	90.4
160.0	9.304	33.939	26.242	180.04	0.367	90.6
180.0	9.178	33.995	26.306	174.30	0.403	90.7
200.0	8.949	33.966	26.321	173.23	0.437	90.6
250.1	8.592	34.046	26.439	162.82	0.521	90.8
300.0	7.845	34.100	26.594	148.60	0.599	90.5
350.0	7.491	34.129	26.668	142.23	0.672	90.8
400.0	7.056	34.151	26.747	135.23	0.741	90.7
450.0	6.360	34.183	26.866	124.11	0.806	90.7
500.0	5.874	34.217	26.954	115.93	0.866	90.5
550.0	5.517	34.244	27.020	110.01	0.923	90.2
600.0	5.351	34.274	27.064	106.24	0.977	90.6
650.0	5.101	34.310	27.122	101.05	1.028	90.7
700.0	4.837	34.345	27.180	95.69	1.078	90.8
750.0	4.467	34.388	27.255	88.55	1.124	90.5
759.0	4.399	34.396	27.269	87.23	1.132	90.4

STATION: 37  
LAT: 36° 17.0 N.

DATE: 10/24/95  
LON: 122° 05.8 W.

0052 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	15.317	33.264	24.566	336.17	0.010	85.9
5.0	15.033	33.267	24.630	330.11	0.017	85.5
10.0	14.953	33.276	24.655	327.94	0.033	85.2
15.0	14.387	33.264	24.766	317.44	0.049	85.6
20.0	12.931	33.301	25.092	286.52	0.064	85.0
25.0	12.062	33.243	25.215	274.92	0.079	88.3
30.0	11.558	33.287	25.343	262.88	0.092	89.2
40.0	11.061	33.458	25.565	241.98	0.117	90.3
50.0	10.853	33.526	25.656	233.56	0.141	90.0
60.0	10.738	33.572	25.712	228.44	0.164	89.3
70.0	10.688	33.621	25.759	224.19	0.187	90.0
80.0	10.501	33.666	25.827	217.96	0.209	89.6
90.0	10.372	33.696	25.873	213.80	0.230	90.0
100.0	10.157	33.744	25.947	206.88	0.251	90.3
120.0	9.561	33.836	26.118	190.95	0.291	90.6
140.0	9.350	33.857	26.170	186.45	0.329	90.4
160.0	9.297	33.868	26.188	185.14	0.366	90.3
180.0	9.117	33.952	26.283	176.48	0.402	90.0
200.0	8.790	34.004	26.375	168.03	0.437	90.6
250.0	7.922	34.063	26.554	151.60	0.517	90.3
300.0	7.316	34.146	26.705	137.77	0.589	91.1
350.0	6.774	34.160	26.792	129.99	0.656	90.8
400.0	6.611	34.172	26.823	127.62	0.720	90.7
450.0	6.160	34.201	26.906	120.16	0.782	90.1
500.0	5.955	34.218	26.945	116.92	0.841	89.2
517.0	5.928	34.220	26.950	116.61	0.861	88.8

STATION: 38  
LAT: 36° 17.1 N.

DATE: 10/24/95  
LON: 122° 02.9 W.

0145 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.871	33.282	24.677	325.57	0.010	84.9
5.0	14.800	33.286	24.695	323.91	0.016	84.1
10.0	13.430	33.306	24.997	295.36	0.032	82.6
15.0	12.540	33.312	25.177	278.29	0.046	82.9
20.0	11.518	33.359	25.406	256.64	0.060	88.5
25.0	11.392	33.383	25.448	252.76	0.072	89.2
30.0	11.390	33.453	25.502	247.74	0.085	88.1
40.0	11.289	33.521	25.573	241.18	0.109	88.2
50.0	11.076	33.567	25.648	234.35	0.133	88.6
60.0	10.777	33.633	25.753	224.57	0.156	89.5
70.0	10.573	33.685	25.829	217.54	0.178	90.0
80.0	10.394	33.723	25.889	211.98	0.199	89.8
90.0	9.904	33.808	26.040	197.86	0.220	89.5
100.0	9.617	33.877	26.141	188.38	0.239	89.5
120.0	9.054	34.005	26.333	170.49	0.275	90.3
140.0	8.572	34.029	26.427	161.80	0.308	90.2
160.0	8.422	34.037	26.457	159.35	0.340	90.3
180.0	8.351	34.040	26.470	158.42	0.372	90.3
200.0	8.317	34.042	26.478	158.09	0.404	90.1
250.0	7.851	34.066	26.566	150.40	0.482	89.8
268.0	7.692	34.074	26.596	147.78	0.509	89.9



STATION: 39  
LAT: 36° 14.2 N.

DATE: 10/24/95  
LON: 122° 01.1 W.

0229 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	12.688	33.431	25.239	272.08	0.008	78.0
5.0	12.691	33.429	25.237	272.32	0.014	78.0
10.0	12.692	33.417	25.228	273.33	0.027	78.0
15.0	12.463	33.463	25.308	265.84	0.041	77.9
20.0	11.878	33.470	25.425	254.85	0.054	78.8
25.0	11.815	33.481	25.445	253.06	0.067	79.9
30.0	11.693	33.501	25.484	249.51	0.079	82.8
40.0	11.243	33.571	25.620	236.73	0.103	85.3
50.0	11.087	33.595	25.667	232.48	0.127	88.3
60.0	10.789	33.651	25.765	223.44	0.150	89.6
70.0	10.545	33.686	25.834	217.02	0.172	89.2
80.0	10.120	33.794	25.992	202.20	0.193	90.3
90.0	9.689	33.885	26.136	188.71	0.212	89.9
100.0	9.535	33.912	26.182	184.47	0.231	90.1
120.0	8.501	33.884	26.325	171.14	0.266	90.6
140.0	8.618	33.977	26.379	166.38	0.300	90.8
160.0	8.851	34.076	26.421	162.87	0.333	90.6
180.0	8.547	34.064	26.459	159.56	0.365	90.5
200.0	8.286	34.040	26.481	157.77	0.397	90.6
250.0	7.603	34.083	26.616	145.57	0.473	89.7
300.0	7.221	34.102	26.684	139.69	0.544	90.4
350.1	6.842	34.150	26.774	131.68	0.612	89.9
400.0	6.470	34.177	26.846	125.38	0.676	89.6
450.0	6.105	34.209	26.919	118.85	0.737	90.1
500.0	5.666	34.253	27.008	110.60	0.794	88.8
511.0	5.522	34.271	27.040	107.56	0.806	88.9

STATION: 40  
LAT: 36° 12.0 N.

DATE: 10/24/95  
LON: 122° 02.3 W.

0314 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	12.838	33.453	25.227	273.25	0.012	80.1
5.0	12.823	33.454	25.231	272.95	0.017	80.2
10.0	11.996	33.466	25.400	256.98	0.030	71.5
15.0	11.918	33.475	25.421	255.09	0.043	76.0
20.0	11.677	33.505	25.490	248.69	0.056	81.6
25.0	11.515	33.530	25.539	244.11	0.068	85.1
30.0	11.435	33.549	25.568	241.45	0.080	86.1
40.0	10.862	33.661	25.759	223.52	0.103	89.8
50.0	10.604	33.693	25.829	217.05	0.125	90.2
60.0	10.521	33.694	25.845	215.78	0.147	90.2
70.0	10.330	33.762	25.931	207.83	0.168	90.3
80.0	10.166	33.783	25.975	203.80	0.189	89.8
90.0	10.041	33.814	26.021	199.63	0.209	90.3
100.0	9.938	33.841	26.059	196.21	0.229	90.4
120.0	9.626	33.907	26.163	186.71	0.267	90.6
140.0	8.969	33.905	26.268	177.00	0.303	90.7
160.0	8.790	33.926	26.313	173.04	0.338	90.8
180.0	8.538	33.993	26.405	164.67	0.372	90.9
200.0	8.170	33.990	26.459	159.81	0.405	90.9
250.0	7.973	34.088	26.565	150.55	0.482	90.9
300.0	7.414	34.137	26.685	139.78	0.555	91.0
350.0	6.871	34.176	26.791	130.15	0.622	91.1
400.0	6.477	34.182	26.849	125.08	0.686	91.0
450.0	6.048	34.195	26.915	119.17	0.747	90.8
500.0	5.755	34.243	26.989	112.50	0.805	90.5
550.0	5.414	34.287	27.066	105.48	0.860	90.3
600.0	5.129	34.325	27.130	99.72	0.911	90.3
650.0	4.976	34.344	27.164	96.92	0.960	90.4
700.0	4.814	34.363	27.197	94.09	1.008	90.6
750.0	4.654	34.377	27.226	91.62	1.054	90.2
800.0	4.568	34.388	27.245	90.22	1.100	89.1
806.0	4.549	34.390	27.249	89.92	1.105	88.9

STATION: 41  
LAT: 36° 10.3 N.

DATE: 10/24/95  
LON: 122° 04.0 W.

0408 UTC

P (dbar)	T (°C)	S (psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	12.257	33.433	25.325	263.91	0.008	77.8
5.0	12.253	33.439	25.330	263.50	0.013	77.9
10.0	12.048	33.453	25.379	258.92	0.026	76.6
15.0	11.969	33.461	25.400	257.05	0.039	76.9
20.0	11.907	33.464	25.415	255.79	0.052	78.2
25.0	11.836	33.478	25.439	253.62	0.065	79.3
30.0	11.767	33.483	25.456	252.13	0.077	82.8
40.0	11.456	33.527	25.548	243.65	0.102	87.0
50.0	11.174	33.625	25.676	231.71	0.126	89.5
60.0	10.831	33.673	25.774	222.58	0.149	89.5
70.0	10.525	33.708	25.855	215.02	0.170	90.0
80.0	10.216	33.745	25.938	207.37	0.192	90.5
90.0	10.051	33.807	26.014	200.35	0.212	90.5
100.0	9.809	33.863	26.098	192.48	0.232	90.5
120.0	9.577	33.893	26.161	186.95	0.270	90.7
140.0	9.206	33.945	26.262	177.67	0.306	90.6
160.0	8.893	33.987	26.345	170.13	0.341	90.7
180.0	8.761	34.033	26.402	165.05	0.374	90.9
200.0	8.575	34.053	26.447	161.09	0.407	90.9
250.0	7.902	34.064	26.557	151.23	0.485	91.1
300.0	7.548	34.118	26.651	143.05	0.559	91.2
350.0	6.967	34.163	26.768	132.42	0.628	91.1
400.0	6.549	34.184	26.841	125.93	0.692	91.1
450.0	5.931	34.196	26.931	117.55	0.753	90.7
500.0	5.777	34.242	26.986	112.84	0.811	90.5
550.0	5.598	34.264	27.026	109.52	0.866	90.0
600.0	5.303	34.299	27.089	103.80	0.919	90.5
650.0	5.049	34.332	27.145	98.77	0.970	90.8
700.0	4.784	34.361	27.198	93.90	1.018	90.9
750.0	4.614	34.377	27.231	91.10	1.065	90.8
800.0	4.411	34.400	27.271	87.44	1.109	90.5
850.0	4.206	34.425	27.313	83.65	1.152	90.3
900.0	3.969	34.447	27.356	79.61	1.193	90.3
950.0	3.896	34.458	27.372	78.41	1.232	90.5
999.0	3.755	34.473	27.398	76.03	1.270	90.2

STATION: 42  
LAT: 36° 12.9 N.

DATE: 10/24/95 0533 UTC  
LON: 122° 09.9 W.

P (dbar)	T (°C)	S (psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	15.097	33.277	24.624	330.62	0.015	86.0
5.0	15.083	33.277	24.627	330.43	0.021	86.0
10.0	14.245	33.300	24.824	311.78	0.038	82.5
15.0	13.645	33.293	24.943	300.61	0.053	80.3
20.0	12.414	33.314	25.203	275.97	0.067	81.8
25.0	12.309	33.432	25.315	265.42	0.081	79.4
30.0	12.226	33.428	25.327	264.46	0.094	80.3
40.0	11.992	33.450	25.388	258.85	0.120	80.3
50.0	11.292	33.560	25.603	238.61	0.145	88.0
60.0	11.169	33.575	25.638	235.55	0.169	89.1
70.0	10.926	33.632	25.725	227.42	0.192	89.8
80.0	10.760	33.650	25.769	223.50	0.214	89.4
90.0	10.260	33.738	25.925	208.84	0.236	89.9
100.0	10.157	33.771	25.968	204.89	0.257	90.1
120.0	9.915	33.824	26.051	197.45	0.297	90.0
140.0	9.614	33.909	26.167	186.78	0.335	90.4
160.0	9.154	33.942	26.268	177.45	0.372	90.6
180.0	8.873	33.975	26.339	171.05	0.407	90.3
200.0	8.634	34.041	26.428	162.94	0.440	90.8
250.0	8.075	34.103	26.561	150.97	0.519	90.7
300.0	7.678	34.130	26.641	144.07	0.592	91.1
350.0	7.298	34.154	26.715	137.65	0.663	91.1
400.0	6.758	34.182	26.811	128.90	0.729	91.0
450.0	6.166	34.199	26.903	120.39	0.792	91.1
500.0	5.790	34.219	26.967	114.67	0.850	90.9
550.0	5.414	34.230	27.021	109.73	0.907	90.9
600.0	5.215	34.264	27.072	105.32	0.960	90.8
650.0	5.034	34.322	27.139	99.30	1.012	90.5
700.0	4.793	34.352	27.191	94.66	1.060	90.9
750.0	4.594	34.381	27.236	90.59	1.106	91.0
800.0	4.424	34.402	27.272	87.43	1.151	90.9
850.0	4.201	34.426	27.315	83.50	1.194	90.9
900.0	4.019	34.442	27.347	80.58	1.235	90.7
950.0	3.812	34.462	27.384	77.05	1.274	90.6
1000.0	3.650	34.482	27.416	74.11	1.312	89.6
1033.0	3.583	34.490	27.429	73.03	1.336	88.3

STATION: 43  
LAT: 36° 14.1 N.

DATE: 10/24/95  
LON: 122° 06.4 W.

0650 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.637	33.296	24.738	319.82	0.011	85.1
5.0	14.598	33.292	24.744	319.33	0.018	84.8
10.0	13.896	33.273	24.876	306.83	0.033	83.4
15.0	13.529	33.266	24.946	300.36	0.049	84.7
20.0	12.580	33.251	25.122	283.66	0.063	87.4
25.0	12.117	33.226	25.191	277.18	0.077	88.0
30.0	11.724	33.253	25.286	268.28	0.091	89.3
40.0	11.452	33.319	25.387	258.89	0.117	89.7
50.0	11.595	33.443	25.457	252.55	0.143	88.0
60.0	11.295	33.558	25.602	238.98	0.167	88.5
70.0	10.818	33.639	25.750	225.08	0.191	89.5
80.0	10.708	33.646	25.775	222.88	0.213	89.8
90.0	10.474	33.709	25.865	214.55	0.235	89.9
100.0	10.340	33.743	25.915	209.98	0.256	90.3
120.0	9.845	33.859	26.090	193.77	0.297	90.3
140.0	9.505	33.927	26.200	183.66	0.334	90.6
160.0	8.611	33.896	26.318	172.58	0.370	90.8
180.0	8.735	34.008	26.387	166.49	0.404	90.7
200.0	8.488	34.043	26.452	160.58	0.436	90.9
250.0	8.263	34.082	26.517	155.27	0.516	91.0
300.0	7.643	34.104	26.627	145.41	0.591	91.1
350.0	7.316	34.151	26.710	138.12	0.661	91.1
400.0	6.790	34.176	26.803	129.76	0.729	91.1
450.0	6.399	34.189	26.865	124.22	0.792	91.1
500.0	5.676	34.190	26.958	115.38	0.852	91.0
550.0	5.540	34.267	27.036	108.54	0.908	90.7
600.0	5.279	34.305	27.097	103.04	0.961	90.7
650.0	5.031	34.336	27.151	98.19	1.011	90.4
700.0	4.721	34.367	27.211	92.66	1.059	90.5
750.0	4.512	34.389	27.251	89.03	1.104	90.5
775.0	4.451	34.397	27.264	87.96	1.126	89.8

STATION: 44  
LAT: 36° 15.0 N.

DATE: 10/24/95  
LON: 122° 04.3 W.

0750 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.583	33.341	24.992	295.61	0.009	82.5
5.0	13.575	33.340	24.993	295.55	0.015	82.3
10.0	12.809	33.297	25.113	284.29	0.029	82.8
15.0	12.469	33.251	25.143	281.52	0.043	86.4
20.0	12.248	33.229	25.169	279.20	0.058	87.5
25.0	11.995	33.216	25.207	275.73	0.071	88.6
30.0	11.647	33.317	25.350	262.19	0.085	89.2
40.0	11.515	33.388	25.429	254.97	0.111	88.7
50.0	11.361	33.539	25.574	241.35	0.135	87.7
60.0	11.060	33.599	25.676	231.93	0.159	89.2
70.0	10.812	33.644	25.755	224.59	0.182	89.4
80.0	10.618	33.676	25.814	219.19	0.204	89.4
90.0	10.580	33.687	25.830	217.91	0.226	89.7
100.0	10.348	33.735	25.907	210.72	0.247	90.0
120.0	9.917	33.839	26.062	196.39	0.288	90.2
140.0	9.724	33.899	26.142	189.23	0.327	90.4
160.0	9.004	33.931	26.284	175.95	0.363	90.7
180.0	8.763	33.930	26.320	172.77	0.398	90.9
200.0	8.469	33.936	26.371	168.19	0.432	90.9
250.0	8.254	34.029	26.477	159.01	0.514	90.9
300.0	7.877	34.095	26.585	149.47	0.591	90.9
350.0	7.265	34.138	26.707	138.38	0.663	90.8
400.0	6.732	34.160	26.797	130.18	0.730	90.7
450.0	6.239	34.194	26.890	121.75	0.793	89.9
500.0	5.987	34.223	26.945	116.92	0.853	89.3
517.0	5.787	34.238	26.982	113.46	0.873	89.1

**STATION: 45**  
**LAT: 36° 15.7 N.**

**DATE: 10/24/95**  
**LON: 122° 01.5 W.**

**0844 UTC**

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	12.642	33.384	25.213	274.60	0.008	79.9
5.0	12.624	33.382	25.214	274.52	0.014	80.3
10.0	11.777	33.419	25.404	256.56	0.027	83.9
15.0	11.721	33.439	25.431	254.16	0.040	83.8
20.0	11.646	33.468	25.467	250.88	0.052	85.2
25.0	11.552	33.492	25.502	247.60	0.065	86.1
30.0	11.525	33.510	25.522	245.89	0.077	86.2
40.0	11.232	33.528	25.589	239.69	0.101	88.1
50.0	11.059	33.587	25.666	232.58	0.125	89.1
60.0	10.942	33.596	25.694	230.12	0.148	89.1
70.0	10.670	33.667	25.798	220.51	0.171	89.5
80.0	10.609	33.683	25.821	218.53	0.193	89.3
90.0	10.590	33.686	25.827	218.19	0.215	88.7
100.0	10.105	33.795	25.996	202.27	0.236	89.5
120.0	9.769	33.854	26.099	192.87	0.275	89.5
140.0	9.690	33.877	26.130	190.35	0.313	90.0
160.0	9.382	33.920	26.214	182.66	0.350	90.2
180.0	9.107	33.981	26.307	174.22	0.386	90.2
200.0	8.718	34.037	26.412	164.46	0.419	90.1
250.0	8.013	34.057	26.536	153.36	0.498	90.0
265.0	7.828	34.069	26.572	150.11	0.521	89.7

**STATION: 46**  
**LAT: 36° 16.1 N.**

**DATE: 10/24/95**  
**LON: 122° 00.5 W.**

**0918 UTC**

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	12.595	33.426	25.254	270.62	0.008	80.5
5.0	12.600	33.428	25.254	270.70	0.017	80.7
10.0	12.367	33.445	25.313	265.28	0.030	80.4
15.0	11.897	33.441	25.398	257.26	0.043	81.0
20.0	11.803	33.462	25.432	254.12	0.056	81.8
25.0	11.747	33.475	25.453	252.27	0.068	82.6
30.0	11.655	33.480	25.474	250.37	0.081	83.7
40.0	11.629	33.489	25.486	249.48	0.106	84.3
50.0	11.536	33.503	25.514	247.08	0.131	85.3
60.0	11.102	33.567	25.643	235.04	0.155	88.3
70.0	11.036	33.582	25.667	232.99	0.178	88.6
80.0	10.800	33.635	25.750	225.30	0.201	89.5
90.0	10.774	33.648	25.765	224.06	0.224	89.2
100.0	10.462	33.713	25.871	214.23	0.246	89.4
101.0	10.438	33.732	25.890	212.46	0.248	89.4

**STATION: 47**  
**LAT: 36° 17.6 N.**

**DATE: 10/24/95 1019 UTC**  
**LON: 121° 55.5 W.**

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.293	33.408	25.102	285.18	0.009	78.2
5.0	13.290	33.409	25.103	285.08	0.014	78.2
10.0	13.127	33.417	25.142	281.51	0.029	77.3
15.0	12.796	33.465	25.245	271.82	0.042	81.0
20.0	12.273	33.506	25.378	259.29	0.056	87.1
25.0	12.097	33.519	25.421	255.31	0.068	86.5
30.0	11.956	33.524	25.453	252.46	0.081	87.6
40.0	11.463	33.581	25.588	239.79	0.106	88.1
45.0	11.272	33.591	25.631	235.81	0.118	88.3

**STATION: 48**  
**LAT: 36° 13.5 N.**

**DATE: 10/24/95 1124 UTC**  
**LON: 121° 49.1 W.**

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.188	33.479	25.178	277.98	0.016	79.3
5.0	13.188	33.479	25.178	277.98	0.022	79.1
10.0	13.195	33.479	25.177	278.24	0.036	79.1
15.0	13.252	33.503	25.184	277.67	0.050	79.5
20.0	13.114	33.540	25.240	272.45	0.064	82.1
25.0	12.854	33.548	25.298	267.08	0.077	85.6
30.0	12.545	33.536	25.349	262.31	0.090	85.4
37.0	12.484	33.537	25.362	261.26	0.109	85.8

**STATION: 49**  
**LAT: 36° 13.0 N.**

**DATE: 10/24/95 1140 UTC**  
**LON: 121° 49.4 W.**

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.507	33.496	25.127	282.75	0.012	78.4
5.0	13.507	33.496	25.127	282.80	0.018	78.1
10.0	13.528	33.516	25.138	281.91	0.032	79.4
15.0	13.390	33.522	25.171	278.94	0.046	82.1
20.0	13.070	33.531	25.242	272.28	0.060	84.8
25.0	12.773	33.548	25.314	265.58	0.073	86.5
30.0	12.246	33.563	25.428	254.81	0.086	88.3
40.0	12.045	33.571	25.472	250.87	0.111	88.7
50.0	11.951	33.574	25.493	249.14	0.136	88.7
60.0	11.865	33.574	25.509	247.88	0.161	88.8
70.0	11.356	33.607	25.628	236.68	0.185	89.2
80.0	11.127	33.628	25.687	231.32	0.209	89.3
90.0	10.201	33.789	25.974	204.11	0.230	88.7



STATION: 50  
LAT: 36° 12.6 N.

DATE: 10/24/95  
LON: 121° 49.8 W.

1159 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.564	33.515	25.130	282.50	0.009	82.8
5.0	13.559	33.515	25.131	282.44	0.014	83.0
10.0	13.559	33.516	25.132	282.52	0.028	83.1
15.0	13.177	33.511	25.205	275.64	0.042	84.8
20.0	12.972	33.508	25.244	272.12	0.056	85.6
25.0	12.570	33.510	25.324	264.58	0.069	86.6
30.0	12.345	33.536	25.388	258.64	0.082	87.8
40.0	11.813	33.574	25.518	246.46	0.108	88.7
50.0	11.686	33.580	25.547	243.99	0.132	88.9
60.0	11.513	33.598	25.593	239.84	0.156	89.1
70.0	11.309	33.615	25.644	235.23	0.180	89.2
80.0	10.777	33.677	25.787	221.77	0.203	89.4
90.0	10.395	33.754	25.914	209.90	0.225	89.2
100.0	9.937	33.847	26.065	195.72	0.245	89.7
120.0	9.595	33.898	26.162	186.88	0.283	89.9
140.0	9.423	33.933	26.217	181.98	0.320	90.1
160.0	9.129	33.993	26.312	173.34	0.356	89.9
180.0	8.775	34.028	26.396	165.65	0.389	89.8
194.0	8.243	34.050	26.495	156.33	0.412	89.0

STATION: 51  
LAT: 36° 11.2 N.

DATE: 10/24/95  
LON: 121° 51.3 W.

1232 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.314	33.432	25.117	283.72	0.009	84.8
5.0	13.318	33.432	25.117	283.81	0.014	84.7
10.0	13.047	33.428	25.167	279.19	0.028	86.1
15.0	12.408	33.471	25.325	264.26	0.042	87.7
20.0	12.307	33.493	25.361	260.92	0.055	87.7
25.0	11.684	33.578	25.545	243.52	0.068	88.4
30.0	11.513	33.566	25.567	241.52	0.080	88.8
40.0	11.084	33.640	25.703	228.84	0.103	89.6
50.0	10.953	33.652	25.736	225.99	0.126	89.9
60.0	10.872	33.684	25.775	222.45	0.148	89.7
70.0	10.746	33.707	25.816	218.82	0.170	89.6
80.0	10.648	33.736	25.856	215.19	0.192	89.5
90.0	10.555	33.756	25.888	212.41	0.214	89.3
100.0	10.332	33.760	25.929	208.63	0.235	90.2
120.0	9.821	33.860	26.094	193.32	0.275	90.5
140.0	9.248	33.931	26.244	179.37	0.312	90.6
160.0	8.872	33.941	26.312	173.22	0.347	90.6
180.0	8.571	33.991	26.399	165.29	0.381	90.6
200.0	8.402	34.051	26.472	158.70	0.414	90.4
250.0	7.647	34.060	26.591	147.90	0.490	91.0
300.0	7.325	34.109	26.675	140.62	0.562	89.3
350.0	7.019	34.141	26.744	134.70	0.631	88.6
400.0	6.688	34.167	26.809	129.05	0.697	89.2
450.0	6.294	34.190	26.880	122.72	0.760	89.1
495.0	6.030	34.210	26.929	118.41	0.814	88.5

STATION: 52  
LAT: 36° 09.7 N.

DATE: 10/24/95  
LON: 121° 52.5 W.

1312 UTC

P (dbar)	T (°C)	S (psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta$	%Trans
3.0	13.414	33.424	25.090	286.26	0.014	83.1
5.0	13.406	33.423	25.091	286.27	0.019	83.1
10.0	12.987	33.408	25.163	279.53	0.033	80.8
15.0	12.481	33.424	25.275	268.96	0.047	87.1
20.0	11.699	33.537	25.510	246.72	0.060	87.4
25.0	11.244	33.602	25.644	234.13	0.072	89.9
30.0	10.846	33.654	25.756	223.60	0.083	89.4
40.0	10.585	33.684	25.826	217.17	0.105	90.2
50.0	10.455	33.709	25.868	213.35	0.127	90.3
60.0	10.321	33.732	25.909	209.67	0.148	90.4
70.0	10.226	33.755	25.944	206.60	0.169	90.3
80.0	10.140	33.790	25.986	202.80	0.190	90.4
90.0	10.167	33.811	25.998	201.90	0.210	90.3
100.0	10.017	33.848	26.052	196.91	0.230	90.5
120.0	9.742	33.887	26.129	190.02	0.268	90.5
140.0	9.413	33.959	26.239	179.87	0.305	90.6
160.0	9.184	33.955	26.273	176.99	0.341	90.7
180.0	8.351	33.951	26.400	165.06	0.375	90.3
200.0	8.079	34.025	26.499	155.92	0.407	90.9
250.0	7.663	34.074	26.600	147.12	0.483	89.0
300.0	7.318	34.111	26.679	140.26	0.555	89.4
350.0	6.978	34.145	26.753	133.86	0.623	89.1
400.0	6.690	34.168	26.810	128.98	0.689	89.3
450.0	6.253	34.201	26.893	121.42	0.752	89.8
500.0	5.915	34.225	26.956	115.85	0.811	88.7
550.0	5.730	34.254	27.002	111.97	0.868	90.0
600.0	5.435	34.287	27.064	106.31	0.923	89.5
650.0	5.239	34.314	27.109	102.45	0.975	88.3
700.0	5.057	34.334	27.147	99.22	1.025	89.0
750.0	4.919	34.354	27.178	96.60	1.074	88.8
800.0	4.710	34.378	27.221	92.73	1.122	88.6
850.0	4.410	34.412	27.282	86.99	1.167	86.7

STATION: 53  
LAT: 36° 08.0 N.

DATE: 10/24/95  
LON: 121° 53.9 W.

1405 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.395	33.359	25.043	290.63	0.014	83.1
5.0	13.404	33.359	25.043	290.84	0.020	83.1
10.0	13.403	33.358	25.042	291.01	0.034	83.3
15.0	13.393	33.361	25.047	290.74	0.049	83.0
20.0	13.211	33.362	25.084	287.34	0.063	82.6
25.0	13.017	33.371	25.130	283.11	0.077	82.8
30.0	12.321	33.447	25.324	264.74	0.091	86.0
40.0	11.536	33.592	25.584	240.22	0.116	88.8
50.0	10.680	33.679	25.805	219.38	0.139	90.2
60.0	10.384	33.721	25.890	211.52	0.161	90.3
70.0	10.117	33.738	25.949	206.07	0.182	89.6
80.0	10.028	33.781	25.997	201.67	0.202	90.2
90.0	9.640	33.780	26.061	195.76	0.222	90.6
100.0	9.500	33.828	26.122	190.15	0.241	90.6
120.0	9.326	33.896	26.204	182.79	0.278	90.3
140.0	9.030	33.909	26.262	177.62	0.315	90.2
160.0	8.976	33.994	26.337	170.88	0.349	90.5
180.0	8.661	33.973	26.370	168.04	0.383	89.2
200.0	8.177	33.984	26.453	160.33	0.416	90.8
250.0	7.834	34.037	26.546	152.29	0.494	90.6
300.0	7.345	34.053	26.629	145.00	0.569	90.6
350.0	7.102	34.129	26.723	136.77	0.639	88.8
400.0	6.667	34.175	26.818	128.15	0.705	88.5
450.0	6.210	34.179	26.881	122.49	0.768	90.2
500.0	5.992	34.229	26.950	116.52	0.828	88.9
550.0	5.643	34.264	27.020	110.12	0.884	89.5
600.0	5.326	34.302	27.089	103.82	0.938	89.1
650.0	5.183	34.319	27.120	101.38	0.989	89.7
700.0	5.062	34.334	27.146	99.30	1.039	88.8
750.0	4.861	34.359	27.189	95.50	1.088	88.6
800.0	4.768	34.371	27.210	93.94	1.135	88.7
850.0	4.481	34.405	27.268	88.43	1.181	89.6
900.0	4.316	34.421	27.299	85.67	1.224	89.1
950.0	4.088	34.445	27.342	81.64	1.266	88.8
1000.0	3.857	34.467	27.384	77.64	1.306	89.2
1027.0	3.801	34.474	27.395	76.69	1.327	89.3

STATION 54  
LAT: 36° 06.0 N.

DATE: 10/24/95  
LON: 121° 51.4 W.

1511 UTC

P (dbar)	T (°C)	S (psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.734	33.362	24.978	296.94	0.009	82.6
5.0	13.735	33.364	24.979	296.90	0.015	82.6
10.0	13.734	33.363	24.979	297.04	0.030	82.4
15.0	13.704	33.360	24.983	296.83	0.045	82.5
20.0	13.042	33.382	25.132	282.74	0.059	83.8
25.0	12.216	33.467	25.359	261.28	0.073	85.8
30.0	11.734	33.555	25.518	246.25	0.086	88.8
40.0	11.490	33.581	25.583	240.26	0.110	89.6
50.0	10.997	33.647	25.724	227.08	0.133	90.2
60.0	10.837	33.665	25.767	223.24	0.156	90.3
70.0	10.456	33.708	25.867	213.88	0.178	90.4
80.0	10.138	33.757	25.960	205.22	0.199	90.6
90.0	9.937	33.776	26.009	200.80	0.219	90.5
100.0	9.776	33.808	26.061	195.99	0.239	90.6
120.0	9.492	33.849	26.140	188.86	0.277	90.6
140.0	9.162	33.861	26.203	183.25	0.314	88.9
160.0	8.963	33.978	26.327	171.85	0.350	90.6
180.0	8.753	33.989	26.368	168.22	0.384	90.8
200.0	8.263	33.964	26.424	163.09	0.417	90.8
250.0	7.822	34.046	26.554	151.48	0.496	90.8
300.0	7.191	34.042	26.642	143.62	0.570	91.0
350.0	6.812	34.121	26.757	133.32	0.639	90.9
400.0	6.422	34.146	26.829	126.96	0.704	90.9
450.0	6.180	34.180	26.886	122.01	0.766	90.9
500.0	5.933	34.209	26.941	117.27	0.826	90.8
550.0	5.512	34.247	27.023	109.71	0.883	90.5
600.0	5.270	34.294	27.090	103.72	0.936	90.9
650.0	5.078	34.323	27.135	99.80	0.987	88.8
700.0	4.933	34.348	27.172	96.65	1.036	90.6
750.0	4.812	34.366	27.200	94.33	1.084	90.6
800.0	4.631	34.388	27.238	91.04	1.130	88.8
850.0	4.451	34.409	27.274	87.79	1.175	89.0
900.0	4.279	34.426	27.307	84.87	1.218	88.6
950.0	4.024	34.451	27.354	80.39	1.259	89.3
1000.0	3.841	34.470	27.388	77.25	1.298	89.2
1036.0	3.738	34.480	27.406	75.61	1.326	88.6

STATION: 55  
LAT: 36° 07.4 N.

DATE: 10/24/95  
LON: 121° 49.7 W.

1613 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.428	33.363	25.040	291.01	0.011	82.8
5.0	13.426	33.363	25.041	290.98	0.017	82.1
10.0	13.427	33.364	25.042	291.06	0.032	80.4
15.0	13.423	33.365	25.043	291.06	0.046	83.0
20.0	13.413	33.369	25.049	290.67	0.061	84.2
25.0	12.085	33.476	25.391	258.21	0.074	85.4
30.0	11.472	33.509	25.530	245.03	0.087	87.4
40.0	11.122	33.579	25.648	234.06	0.111	89.4
50.0	10.926	33.628	25.722	227.31	0.134	89.8
60.0	10.680	33.653	25.785	221.46	0.156	89.8
70.0	10.552	33.686	25.833	217.14	0.178	89.9
80.0	10.309	33.734	25.913	209.77	0.200	90.3
90.0	10.120	33.764	25.969	204.64	0.221	90.5
100.0	9.870	33.805	26.043	197.73	0.241	90.5
120.1	9.384	33.849	26.158	187.20	0.279	90.6
140.0	9.107	33.882	26.228	180.82	0.316	90.7
160.0	9.019	33.929	26.279	176.37	0.352	90.7
180.0	8.660	33.984	26.379	167.17	0.386	90.8
200.0	7.982	33.968	26.470	158.68	0.419	90.8
250.0	7.527	34.018	26.575	149.32	0.495	91.0
300.0	7.201	34.077	26.668	141.18	0.568	90.9
350.0	6.785	34.100	26.743	134.55	0.637	90.9
400.0	6.425	34.146	26.828	127.04	0.702	90.8
450.0	6.168	34.185	26.891	121.50	0.765	90.2
500.0	5.987	34.223	26.945	116.92	0.824	88.6
550.0	5.571	34.256	27.023	109.81	0.881	89.4
600.0	5.335	34.295	27.082	104.48	0.934	90.2
650.0	5.113	34.326	27.133	100.00	0.986	89.1
700.0	4.977	34.343	27.163	97.55	1.035	89.6
747.0	4.822	34.362	27.196	94.73	1.080	88.1

STATION: 56  
LAT: 36° 09.5 N.

DATE: 10/24/95  
LON: 121° 46.9 W.

1715 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.823	33.528	25.087	286.55	0.009	71.4
5.0	13.802	33.528	25.091	286.21	0.014	71.2
10.0	13.658	33.549	25.137	282.00	0.029	73.6
15.0	13.259	33.528	25.202	275.99	0.043	83.7
20.0	12.702	33.545	25.325	264.35	0.056	87.0
25.0	12.137	33.550	25.438	253.69	0.069	88.5
30.0	11.862	33.536	25.479	249.94	0.082	88.3
40.0	11.394	33.578	25.599	238.80	0.106	89.4
50.0	10.698	33.669	25.794	220.38	0.129	90.2
60.0	10.525	33.698	25.847	215.57	0.151	90.0
70.0	10.410	33.701	25.870	213.63	0.172	89.9
80.0	10.452	33.775	25.920	209.11	0.193	89.6
90.0	10.347	33.805	25.962	205.34	0.214	89.5
100.0	10.021	33.835	26.041	197.97	0.234	90.3
120.0	9.655	33.887	26.143	188.66	0.273	90.5
140.0	9.259	33.929	26.241	179.69	0.310	90.6
160.0	8.949	33.940	26.299	174.43	0.345	90.7
180.0	8.280	33.915	26.383	166.69	0.379	90.8
200.0	8.115	33.949	26.434	162.08	0.412	90.8
250.0	7.514	34.041	26.595	147.49	0.489	91.0
300.0	7.041	34.077	26.690	139.03	0.561	90.8
350.0	6.990	34.127	26.737	135.29	0.630	88.6
400.0	6.464	34.156	26.830	126.89	0.695	90.6
450.0	6.224	34.207	26.902	120.57	0.757	87.8
489.0	5.952	34.230	26.955	115.81	0.803	88.1

**STATION: 57**  
**LAT: 36° 11.3 N.**

**DATE: 10/24/95**      **1759 UTC**  
**LON: 121° 45.4 W.**

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.714	33.514	25.099	285.47	0.009	74.3
5.0	13.620	33.515	25.119	283.57	0.014	75.9
10.0	13.281	33.473	25.155	280.27	0.028	80.8
15.0	12.974	33.514	25.248	271.54	0.042	84.0
20.0	12.834	33.527	25.285	268.16	0.056	85.4
25.0	12.770	33.525	25.297	267.20	0.069	86.1
30.0	12.722	33.543	25.321	265.05	0.082	86.8
40.0	12.363	33.540	25.388	258.94	0.108	87.2
50.0	11.579	33.588	25.573	241.52	0.134	88.9
60.0	11.275	33.609	25.645	234.87	0.157	88.7
70.0	10.776	33.669	25.781	222.12	0.180	89.4
80.0	10.625	33.698	25.830	217.65	0.202	89.4
90.0	10.429	33.743	25.900	211.24	0.224	89.4
100.0	10.205	33.789	25.974	204.39	0.244	89.5
120.0	10.032	33.820	26.028	199.66	0.285	89.8
140.0	9.384	33.922	26.215	182.13	0.323	90.2
160.0	9.350	33.934	26.231	181.09	0.359	90.1
180.0	9.040	33.986	26.321	172.81	0.394	89.9
199.0	8.597	33.986	26.390	166.43	0.427	89.2

**STATION: 58**  
**LAT: 36° 11.4 N.**

**DATE: 10/24/95**      **1824 UTC**  
**LON: 121° 45.0 W.**

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.658	33.515	25.111	284.29	0.009	76.1
5.0	13.446	33.513	25.152	280.44	0.014	76.4
10.0	13.362	33.523	25.177	278.18	0.028	81.4
15.0	13.040	33.521	25.241	272.27	0.042	83.6
20.0	12.833	33.526	25.285	268.21	0.056	85.0
25.0	12.724	33.536	25.314	265.56	0.069	86.2
30.0	12.659	33.540	25.330	264.18	0.082	86.7
40.0	11.977	33.559	25.476	250.53	0.108	87.3
50.0	11.730	33.569	25.530	245.61	0.133	88.5
60.0	11.435	33.599	25.608	238.41	0.157	88.1
70.0	10.774	33.678	25.788	221.42	0.180	89.2
80.0	10.526	33.725	25.868	214.05	0.201	89.2
90.0	10.247	33.776	25.956	205.85	0.223	88.7
100.0	10.076	33.813	26.014	200.52	0.243	89.6
101.0	10.070	33.815	26.017	200.24	0.245	89.2



**STATION: 59**  
**LAT: 36° 11.8 N.**

**DATE: 10/24/95**      **1850 UTC**  
**LON: 121° 44.1 W.**

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.732	33.518	25.098	285.55	0.009	75.9
5.0	13.453	33.506	25.145	281.09	0.014	76.9
10.0	13.387	33.510	25.162	279.61	0.028	78.1
15.0	13.246	33.511	25.192	276.95	0.042	80.1
20.0	12.922	33.542	25.280	268.69	0.056	83.0
25.0	12.857	33.516	25.273	269.51	0.069	83.3
30.0	12.854	33.517	25.274	269.48	0.083	83.4
40.0	12.865	33.516	25.272	269.97	0.110	83.3
50.0	12.821	33.516	25.280	269.42	0.137	83.4
60.0	10.866	33.671	25.766	223.33	0.160	88.3
67.0	10.796	33.683	25.788	221.37	0.176	87.9

**STATION: 60**  
**LAT: 36° 09.0 N.**

**DATE: 10/24/95**      **1937 UTC**  
**LON: 121° 40.9 W.**

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.255	33.522	24.993	295.54	0.012	80.5
5.0	14.151	33.501	24.998	295.07	0.017	79.6
10.0	13.512	33.491	25.122	283.41	0.032	79.3
15.0	13.372	33.514	25.169	279.13	0.046	79.8
20.0	13.335	33.513	25.175	278.66	0.060	80.6
25.0	13.155	33.516	25.214	275.12	0.074	81.5
30.0	12.799	33.531	25.296	267.41	0.087	84.1
40.0	12.053	33.577	25.476	250.53	0.113	87.2

**STATION: 61**  
**LAT: 36° 08.7 N.**

**DATE: 10/24/95**      **1954 UTC**  
**LON: 121° 41.3 W.**

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.875	33.526	25.075	287.71	0.013	80.3
5.0	13.675	33.527	25.117	283.82	0.019	80.3
10.0	13.169	33.529	25.220	274.08	0.033	80.6
15.0	13.108	33.539	25.241	272.25	0.046	82.6
20.0	12.765	33.571	25.333	263.60	0.060	83.3
25.0	12.528	33.564	25.374	259.80	0.073	86.1
30.0	11.897	33.590	25.515	246.55	0.085	88.1
40.0	11.450	33.599	25.604	238.24	0.110	88.6
50.0	11.328	33.609	25.635	235.60	0.133	88.8
60.0	11.135	33.631	25.687	230.86	0.157	89.1
70.0	10.921	33.691	25.772	222.98	0.180	88.6
80.0	10.405	33.749	25.908	210.22	0.201	89.4
90.0	10.191	33.795	25.981	203.50	0.222	89.1
100.0	10.075	33.819	26.020	200.01	0.242	88.9
110.0	9.838	33.863	26.094	193.11	0.262	89.2

**STATION: 62**  
**LAT: 36° 08.7 N.**

**DATE: 10/24/95**      **2015 UTC**  
**LON: 121° 41.5 W.**

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.071	33.518	25.028	292.21	0.009	78.6
5.0	14.008	33.522	25.044	290.70	0.015	77.7
10.0	13.344	33.521	25.179	278.00	0.029	80.3
15.0	13.213	33.530	25.213	274.89	0.043	81.4
20.0	13.154	33.537	25.230	273.42	0.057	82.3
25.0	12.859	33.551	25.300	266.93	0.070	84.7
30.0	12.661	33.560	25.345	262.70	0.083	85.0
40.0	11.830	33.600	25.535	244.88	0.109	88.3
50.0	11.328	33.610	25.635	235.53	0.133	88.7
60.0	11.071	33.636	25.703	229.37	0.156	89.1
70.0	10.726	33.703	25.816	218.76	0.178	89.0
80.0	10.562	33.721	25.859	214.91	0.200	89.1
90.0	10.317	33.771	25.941	207.34	0.221	89.5
100.0	9.957	33.844	26.059	196.25	0.241	89.1
120.0	9.538	33.925	26.192	183.95	0.279	89.6
140.0	9.439	33.945	26.224	181.33	0.316	89.5
160.0	9.256	33.971	26.275	176.90	0.352	89.5
180.0	8.842	34.027	26.385	166.73	0.386	89.2
189.0	8.777	34.032	26.399	165.54	0.401	89.3

STATION: 63  
LAT: 36° 08.1 N.

DATE: 10/24/95  
LON: 121° 42.4 W.

2042 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.134	33.567	25.052	289.89	0.016	79.9
5.0	13.771	33.496	25.073	287.95	0.022	74.6
10.0	13.732	33.518	25.098	285.71	0.036	78.2
15.0	13.365	33.536	25.187	277.40	0.050	84.0
20.0	13.072	33.528	25.240	272.50	0.064	84.6
25.0	12.780	33.534	25.302	266.73	0.077	86.4
30.0	11.972	33.551	25.470	250.80	0.090	88.6
40.0	11.672	33.597	25.562	242.27	0.115	88.9
50.0	11.197	33.623	25.670	232.27	0.139	89.1
60.0	10.824	33.674	25.776	222.37	0.161	89.7
70.0	10.453	33.731	25.886	212.13	0.183	89.8
80.0	10.233	33.761	25.947	206.51	0.204	90.1
90.0	10.138	33.787	25.984	203.23	0.224	90.1
100.0	9.953	33.822	26.043	197.80	0.244	90.2
120.0	9.825	33.860	26.094	193.39	0.284	90.1
140.0	9.455	33.901	26.188	184.79	0.321	90.3
160.0	9.081	34.005	26.329	171.64	0.357	89.8
180.0	8.578	34.056	26.448	160.63	0.390	89.9
200.0	8.446	34.076	26.484	157.51	0.422	89.8
250.0	7.761	34.068	26.581	148.95	0.499	89.6
300.0	7.022	34.068	26.685	139.43	0.571	90.2
350.0	6.815	34.123	26.757	133.28	0.639	89.7
400.0	6.516	34.159	26.826	127.33	0.704	87.4
433.0	6.478	34.167	26.837	126.68	0.746	86.6

STATION: 64  
LAT: 36° 06.0 N.

DATE: 10/24/95  
LON: 121° 45.1 W.

2129 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.871	33.382	24.966	298.13	0.009	79.8
5.0	13.567	33.319	24.979	296.95	0.015	80.4
10.0	13.408	33.388	25.063	289.04	0.030	81.4
15.0	13.057	33.388	25.134	282.47	0.044	82.8
20.0	11.598	33.410	25.431	254.26	0.057	86.8
25.0	11.456	33.501	25.527	245.23	0.070	87.9
30.0	11.330	33.548	25.586	239.71	0.082	88.5
40.0	11.181	33.572	25.633	235.52	0.106	89.1
50.0	10.980	33.590	25.683	231.01	0.129	89.0
60.0	10.825	33.611	25.727	227.05	0.152	89.3
70.0	10.709	33.657	25.783	221.89	0.174	89.4
80.0	10.555	33.698	25.842	216.49	0.196	89.6
90.0	10.159	33.765	25.963	205.17	0.217	90.2
100.0	9.882	33.804	26.040	198.02	0.237	89.9
120.0	9.607	33.860	26.130	189.85	0.276	90.3
140.0	9.224	33.924	26.242	179.53	0.313	90.4
160.0	8.853	33.922	26.300	174.30	0.349	90.5
180.0	8.472	33.928	26.364	168.48	0.383	90.5
200.0	8.294	33.991	26.441	161.57	0.416	90.7
250.0	7.710	34.020	26.550	151.79	0.494	90.6
300.0	7.243	34.076	26.661	141.86	0.568	90.7
350.0	6.899	34.106	26.733	135.66	0.637	90.5
400.0	6.533	34.152	26.818	128.06	0.703	90.4
450.0	6.298	34.185	26.875	123.17	0.766	90.6
500.0	5.930	34.219	26.949	116.48	0.826	90.6
550.0	5.538	34.255	27.026	109.46	0.882	90.5
600.0	5.430	34.271	27.052	107.49	0.936	89.4
650.0	5.230	34.301	27.100	103.31	0.989	88.8
700.0	5.014	34.326	27.145	99.27	1.040	88.8
750.0	4.738	34.362	27.205	93.76	1.089	87.5
800.0	4.583	34.392	27.246	90.13	1.135	87.8
804.0	4.571	34.394	27.249	89.88	1.138	87.8

STATION: 65  
LAT: 36° 02.9 N.

DATE: 10/24/95  
LON: 121° 49.5 W.

2243 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.901	33.365	24.946	299.95	0.010	80.8
5.0	13.905	33.364	24.945	300.20	0.016	80.8
10.0	13.898	33.366	24.947	300.09	0.031	81.0
15.0	13.445	33.357	25.033	292.05	0.046	82.1
20.0	13.164	33.371	25.101	285.72	0.060	84.9
25.0	12.839	33.391	25.181	278.25	0.074	83.4
30.0	12.298	33.437	25.320	265.06	0.088	85.2
40.0	11.482	33.605	25.604	238.33	0.113	89.1
50.0	11.082	33.645	25.707	228.70	0.136	89.9
60.0	10.627	33.689	25.823	217.91	0.159	90.1
70.0	10.279	33.762	25.940	206.99	0.180	89.8
80.0	10.118	33.758	25.964	204.83	0.200	90.1
90.0	9.728	33.746	26.020	199.68	0.221	89.9
100.0	9.703	33.793	26.061	196.00	0.241	90.1
120.0	9.586	33.891	26.158	187.24	0.279	90.4
140.0	9.243	33.926	26.241	179.64	0.315	90.4
160.0	9.003	33.957	26.304	174.05	0.351	90.4
180.0	8.788	33.969	26.348	170.20	0.385	90.5
200.0	8.650	34.002	26.395	166.02	0.419	90.6
250.0	7.744	34.011	26.539	152.91	0.499	90.7
300.0	7.451	34.097	26.648	143.28	0.573	90.7
350.0	7.123	34.110	26.704	138.52	0.643	90.7
400.0	6.901	34.140	26.760	133.84	0.711	90.7
450.0	6.641	34.166	26.815	129.21	0.777	90.7
500.0	6.262	34.221	26.909	120.68	0.840	90.5
550.0	5.582	34.286	27.046	107.66	0.897	90.6
600.0	5.243	34.314	27.108	101.96	0.949	90.7
650.0	4.952	34.347	27.169	96.42	0.999	90.7
700.0	4.739	34.372	27.213	92.50	1.046	90.9
750.0	4.657	34.385	27.232	91.07	1.092	90.7
800.0	4.565	34.400	27.255	89.30	1.137	90.8
850.0	4.418	34.417	27.285	86.74	1.181	90.5
900.0	4.242	34.436	27.318	83.72	1.223	90.4
950.0	4.140	34.445	27.337	82.22	1.265	90.3
982.0	4.014	34.458	27.361	80.02	1.291	89.3

STATION: 66  
LAT: 35° 58.8 N.

DATE: 10/25/95  
LON: 121° 45.4 W.

0006 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.979	33.357	24.924	302.12	0.009	83.5
5.0	13.981	33.356	24.923	302.28	0.015	83.6
10.0	13.546	33.348	25.006	294.52	0.030	83.7
15.0	13.327	33.363	25.062	289.30	0.045	83.7
20.0	13.207	33.365	25.088	286.99	0.059	83.8
25.0	13.170	33.365	25.094	286.46	0.073	85.7
30.0	12.333	33.454	25.327	264.47	0.087	84.4
40.0	11.261	33.458	25.530	245.35	0.113	88.8
50.0	10.973	33.505	25.618	237.15	0.137	89.1
60.0	10.606	33.488	25.669	232.48	0.160	89.2
70.0	10.242	33.517	25.755	224.53	0.183	89.8
80.0	9.917	33.554	25.839	216.69	0.205	90.3
90.0	9.677	33.657	25.959	205.46	0.226	90.1
100.0	9.642	33.712	26.008	201.03	0.247	89.9
120.0	9.493	33.824	26.120	190.75	0.286	90.1
140.0	9.225	33.868	26.199	183.64	0.323	90.3
160.0	8.951	33.943	26.301	174.29	0.359	90.5
180.0	8.639	33.969	26.370	167.98	0.393	90.6
200.0	8.359	33.982	26.424	163.20	0.426	90.6
250.0	7.837	34.060	26.564	150.61	0.505	90.7
300.0	7.432	34.095	26.649	143.16	0.578	90.3
350.0	7.128	34.104	26.700	138.93	0.649	90.4
400.0	6.841	34.132	26.762	133.66	0.717	90.5
450.0	6.662	34.180	26.823	128.46	0.783	90.6
500.0	6.227	34.215	26.908	120.71	0.845	90.3
550.0	5.674	34.275	27.026	109.65	0.902	90.6
600.0	5.312	34.306	27.094	103.36	0.956	90.4
650.0	5.029	34.335	27.150	98.27	1.006	90.7
700.0	4.768	34.372	27.209	92.88	1.054	90.7
750.0	4.681	34.384	27.229	91.41	1.100	90.6
800.0	4.546	34.404	27.260	88.81	1.145	90.5
850.0	4.401	34.422	27.290	86.20	1.189	90.5
900.0	4.238	34.434	27.317	83.80	1.231	90.7
950.0	4.024	34.457	27.358	80.00	1.272	90.6
1000.0	3.860	34.468	27.384	77.62	1.312	90.4
1050.0	3.749	34.481	27.406	75.72	1.350	89.3
1059.0	3.703	34.486	27.414	74.93	1.357	89.5

STATION: 67  
LAT: 36° 01.3 N.

DATE: 10/25/95  
LON: 121° 40.3 W.

0136 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.439	33.528	24.959	298.79	0.012	81.7
5.0	14.260	33.513	24.984	296.40	0.018	80.4
10.0	13.331	33.465	25.138	281.87	0.033	78.3
15.0	13.074	33.520	25.232	273.06	0.047	82.9
20.0	12.046	33.502	25.418	255.51	0.060	87.8
25.0	11.940	33.535	25.463	251.31	0.073	87.2
30.0	11.760	33.569	25.524	245.65	0.085	88.4
40.0	11.240	33.554	25.608	237.89	0.109	89.2
50.0	11.091	33.580	25.655	233.68	0.133	89.4
60.0	10.851	33.654	25.756	224.31	0.156	89.8
70.0	10.762	33.709	25.815	218.90	0.178	89.0
80.0	10.460	33.737	25.889	212.01	0.199	89.6
90.0	10.277	33.770	25.946	206.79	0.220	89.6
100.0	10.250	33.789	25.966	205.10	0.241	89.6
120.0	10.075	33.833	26.031	199.41	0.282	90.1
140.0	9.704	33.884	26.133	190.04	0.320	90.3
160.0	9.370	33.940	26.232	180.98	0.357	90.3
180.0	8.928	33.994	26.345	170.48	0.393	90.5
200.0	8.444	34.015	26.437	162.02	0.426	90.6
250.0	7.920	34.077	26.565	150.56	0.504	90.7
300.0	7.370	34.082	26.647	143.25	0.577	90.5
350.0	6.920	34.111	26.734	135.59	0.647	90.6
400.0	6.692	34.134	26.783	131.47	0.714	90.6
450.0	6.413	34.173	26.851	125.57	0.778	90.7
500.0	6.044	34.208	26.927	118.76	0.839	90.6
550.0	5.754	34.235	26.984	113.67	0.897	89.6
600.0	5.649	34.255	27.013	111.46	0.954	87.5
650.0	5.352	34.299	27.084	104.99	1.008	88.6
700.0	5.198	34.320	27.119	102.07	1.059	88.3
709.0	5.190	34.322	27.121	101.98	1.069	88.0

STATION: 68  
LAT: 36° 02.4 N.

DATE: 10/25/95  
LON: 121° 38.2 W.

0230 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.628	33.520	24.912	303.22	0.009	82.7
5.0	14.621	33.518	24.912	303.33	0.015	82.5
10.0	13.888	33.389	24.967	298.24	0.030	83.8
15.0	13.571	33.526	25.137	282.13	0.045	84.4
20.0	13.400	33.536	25.180	278.22	0.059	85.5
25.0	12.502	33.557	25.374	259.85	0.072	87.5
30.0	12.436	33.575	25.400	257.46	0.085	87.8
40.0	12.377	33.574	25.411	256.70	0.111	88.0
50.0	11.627	33.591	25.566	242.13	0.136	88.7
60.0	11.203	33.589	25.642	235.15	0.160	89.5
70.0	11.043	33.636	25.707	229.13	0.183	89.3
80.0	10.851	33.666	25.766	223.82	0.206	89.0
90.0	10.655	33.700	25.826	218.26	0.228	89.3
100.0	10.340	33.765	25.932	208.39	0.249	89.5
120.0	9.939	33.836	26.056	196.96	0.289	89.7
140.0	9.304	33.938	26.240	179.76	0.327	90.0
160.0	8.952	33.980	26.330	171.57	0.362	90.3
180.0	8.735	34.001	26.381	167.05	0.396	90.3
200.0	8.432	34.010	26.435	162.19	0.429	90.4
250.0	7.831	34.051	26.557	151.21	0.507	90.6
300.0	7.603	34.076	26.610	146.91	0.582	90.6
350.0	6.861	34.076	26.713	137.44	0.653	90.4
400.0	6.775	34.120	26.762	133.61	0.721	87.1
450.0	6.262	34.181	26.877	122.97	0.785	86.9
476.0	6.195	34.182	26.886	122.42	0.817	87.6



**STATION: 69**  
**LAT: 36° 02.9 N.**

**DATE: 10/25/95**  
**LON: 121° 36.9 W.**

**0315 UTC**

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.982	33.517	24.834	310.70	0.009	82.8
5.0	14.899	33.515	24.850	309.17	0.015	82.8
10.0	13.911	33.537	25.076	287.85	0.031	82.5
15.0	13.737	33.534	25.110	284.72	0.045	80.1
20.0	13.573	33.537	25.146	281.45	0.059	81.4
25.0	12.814	33.569	25.322	264.80	0.073	85.1
30.0	12.626	33.575	25.364	260.91	0.086	85.3
40.0	11.960	33.600	25.511	247.20	0.111	87.4
50.0	11.591	33.623	25.598	239.15	0.135	88.6
60.0	11.296	33.638	25.663	233.15	0.159	88.6
70.0	10.991	33.661	25.737	226.36	0.182	88.9
80.0	10.815	33.683	25.785	221.99	0.205	89.2
90.0	10.660	33.685	25.814	219.41	0.227	89.4
100.0	10.198	33.790	25.976	204.18	0.248	89.7
120.0	9.919	33.849	26.069	195.71	0.288	89.1
140.0	9.386	33.968	26.251	178.77	0.325	89.7
160.0	9.157	33.992	26.307	173.78	0.360	88.7
180.0	8.853	34.032	26.387	166.53	0.394	89.6
200.0	8.509	34.046	26.451	160.69	0.428	89.0
235.0	8.055	34.058	26.530	153.65	0.482	89.2

**STATION: 70**  
**LAT: 36° 03.1 N.**

**DATE: 10/25/95**  
**LON: 121° 36.8 W.**

**0343 UTC**

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.859	33.514	24.858	308.35	0.011	83.2
5.0	14.879	33.518	24.857	308.54	0.020	82.8
10.0	13.899	33.538	25.080	287.47	0.035	81.7
15.0	13.793	33.538	25.101	285.55	0.049	81.2
20.0	13.686	33.537	25.122	283.69	0.064	80.9
25.0	12.975	33.573	25.294	267.50	0.078	83.4
30.0	12.832	33.567	25.318	265.35	0.091	85.3
40.0	11.787	33.618	25.557	242.79	0.116	87.8
50.0	11.420	33.632	25.636	235.47	0.140	88.3
60.0	11.061	33.653	25.718	227.92	0.163	89.0
70.0	10.986	33.666	25.741	225.90	0.186	89.0
80.0	10.709	33.722	25.834	217.29	0.208	88.6
84.0	10.571	33.726	25.861	214.78	0.217	89.2

**STATION: 71**  
**LAT: 36° 03.2 N.**

**DATE: 10/25/95**  
**LON: 121° 36.4 W.**

**0400 UTC**

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.837	33.517	24.865	307.72	0.013	83.1
5.0	14.641	33.543	24.927	301.87	0.019	82.7
10.0	13.960	33.529	25.060	289.35	0.034	81.3
15.0	13.937	33.530	25.065	288.97	0.048	81.2
20.0	13.879	33.532	25.079	287.81	0.063	80.8
25.0	13.576	33.538	25.146	281.60	0.077	81.2
30.0	13.531	33.537	25.155	280.90	0.091	81.4
40.0	11.458	33.637	25.633	235.56	0.117	88.0
44.0	11.370	33.638	25.650	234.05	0.126	88.5

**STATION: 72**  
**LAT: 35° 59.8 N.**

**DATE: 10/25/95**  
**LON: 121° 32.3 W.**

**0455 UTC**

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.517	33.532	24.945	300.10	0.013	82.0
5.0	14.267	33.504	24.976	297.19	0.019	82.1
10.0	13.363	33.541	25.191	276.85	0.033	85.2
15.0	13.317	33.548	25.206	275.63	0.047	84.7
20.0	13.244	33.542	25.216	274.80	0.060	84.9
25.0	13.129	33.557	25.251	271.60	0.074	84.7
30.0	13.025	33.563	25.276	269.27	0.088	84.8
40.0	12.295	33.596	25.444	253.55	0.113	85.4
43.0	12.241	33.601	25.458	252.29	0.121	85.8

**STATION: 73**  
**LAT: 35° 59.0 N.**

**DATE: 10/25/95**  
**LON: 121° 34.0 W.**

**0522 UTC**

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.587	33.523	24.923	302.19	0.009	81.3
5.0	14.587	33.525	24.924	302.12	0.015	81.2
10.0	14.300	33.511	24.975	297.48	0.030	83.8
15.0	13.613	33.506	25.113	284.39	0.045	85.4
20.0	13.009	33.531	25.254	271.14	0.059	86.6
25.0	12.870	33.541	25.289	267.91	0.072	87.0
30.0	12.570	33.568	25.369	260.41	0.085	86.3
40.0	11.991	33.606	25.510	247.27	0.110	87.4
50.0	11.588	33.624	25.599	239.04	0.135	88.3
60.0	11.278	33.638	25.667	232.78	0.158	88.8
70.0	11.155	33.657	25.704	229.49	0.181	88.4
80.0	11.151	33.661	25.708	229.32	0.204	88.3
90.0	11.156	33.664	25.710	229.38	0.227	88.3
100.0	11.108	33.678	25.729	227.81	0.250	87.9
115.0	10.552	33.734	25.872	214.48	0.283	88.5

**STATION: 74**  
**LAT: 35° 59.0 N.**

**DATE: 10/25/95**  
**LON: 121° 34.4 W.**

**0540 UTC**

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.615	33.523	24.917	302.77	0.009	81.5
5.0	14.616	33.523	24.917	302.83	0.015	81.4
10.0	14.550	33.521	24.929	301.80	0.030	82.4
15.0	14.212	33.510	24.993	295.87	0.045	83.5
20.0	13.682	33.512	25.104	285.43	0.060	85.1
25.0	13.329	33.508	25.173	279.02	0.074	86.2
30.0	12.882	33.546	25.291	267.85	0.087	87.1
40.0	12.180	33.603	25.471	250.96	0.113	85.7
50.0	11.622	33.623	25.592	239.72	0.138	88.0
60.0	11.555	33.623	25.605	238.74	0.162	88.4
70.0	11.172	33.657	25.701	229.81	0.185	88.3
80.0	11.116	33.665	25.717	228.46	0.208	88.2
90.0	11.048	33.672	25.735	226.97	0.231	88.3
100.0	10.793	33.715	25.815	219.62	0.253	88.1
120.0	9.898	33.835	26.062	196.37	0.295	89.6
140.0	9.103	33.970	26.298	174.27	0.332	89.8
160.0	8.903	33.986	26.342	170.39	0.366	89.9
180.0	8.645	34.011	26.402	164.97	0.400	89.7
200.0	8.125	34.034	26.500	155.90	0.432	88.8
240.0	7.260	34.069	26.653	141.66	0.491	88.7

STATION: 75  
LAT: 35° 58.1 N.

DATE: 10/25/95  
LON: 121° 36.3 W.

0608 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.762	33.516	24.880	306.25	0.009	83.5
5.0	14.760	33.519	24.883	306.08	0.015	83.3
10.0	13.840	33.514	25.073	288.15	0.030	81.6
15.0	13.695	33.515	25.104	285.29	0.045	84.0
20.0	13.370	33.522	25.175	278.65	0.059	84.5
25.0	13.125	33.513	25.218	274.72	0.072	86.7
30.0	12.439	33.557	25.386	258.82	0.086	87.7
40.0	11.940	33.581	25.500	248.20	0.111	88.4
50.0	11.621	33.604	25.577	241.08	0.136	88.8
60.0	11.284	33.637	25.665	232.99	0.159	88.9
70.0	11.134	33.651	25.703	229.57	0.182	89.0
80.0	10.751	33.677	25.791	221.36	0.205	89.7
90.0	10.639	33.689	25.821	218.77	0.227	89.9
100.0	10.597	33.744	25.872	214.16	0.249	89.1
120.0	10.259	33.808	25.980	204.24	0.290	89.6
140.0	9.841	33.861	26.093	193.90	0.330	90.2
160.0	9.195	33.929	26.252	179.03	0.368	90.1
180.0	8.920	34.004	26.354	169.65	0.403	90.2
200.0	8.189	34.018	26.478	157.99	0.435	90.1
250.0	7.675	34.060	26.587	148.30	0.512	90.4
300.0	7.001	34.077	26.695	138.48	0.584	90.2
350.0	6.674	34.132	26.783	130.74	0.651	88.9
400.0	6.422	34.146	26.828	127.00	0.715	89.4
450.0	6.140	34.194	26.903	120.43	0.777	87.8
479.0	6.063	34.205	26.921	119.03	0.812	83.3

STATION: 76  
LAT: 35° 57.0 N.

DATE: 10/25/95  
LON: 121° 39.5 W.

0700 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.587	33.519	24.919	302.47	0.011	82.9
5.0	14.588	33.518	24.919	302.61	0.017	82.6
10.0	14.401	33.516	24.957	299.14	0.032	82.4
15.0	13.408	33.428	25.095	286.16	0.047	82.3
20.0	12.244	33.474	25.359	261.16	0.060	87.3
25.0	11.855	33.509	25.460	251.66	0.073	87.2
30.0	11.706	33.499	25.479	249.92	0.086	87.2
40.0	11.257	33.547	25.599	238.73	0.110	89.0
50.0	11.008	33.617	25.699	229.48	0.133	89.5
60.0	10.915	33.649	25.741	225.74	0.156	89.3
70.0	10.849	33.677	25.774	222.76	0.179	89.4
80.0	10.675	33.687	25.812	219.35	0.201	89.7
90.0	10.495	33.703	25.857	215.35	0.222	89.4
100.0	10.136	33.739	25.947	206.92	0.243	90.0
120.0	9.769	33.812	26.066	195.99	0.284	90.0
140.0	9.327	33.844	26.163	187.04	0.322	90.2
160.0	9.220	33.973	26.282	176.20	0.359	90.3
180.0	8.958	34.009	26.352	169.87	0.393	90.5
200.0	8.627	34.054	26.439	161.85	0.426	90.6
250.0	7.630	34.032	26.571	149.80	0.504	90.6
300.0	7.230	34.097	26.679	140.21	0.577	90.7
350.0	6.710	34.125	26.772	131.75	0.645	90.5
400.0	6.583	34.150	26.810	128.88	0.710	90.5
450.0	6.288	34.184	26.875	123.14	0.773	90.6
500.0	5.794	34.220	26.967	114.67	0.832	90.6
550.0	5.559	34.255	27.024	109.67	0.888	90.7
600.0	5.397	34.290	27.071	105.67	0.942	89.8
650.0	5.087	34.337	27.145	98.82	0.993	87.4
682.0	4.954	34.349	27.170	96.67	1.025	87.0

STATION: 77  
LAT: 35° 54.9 N.

DATE: 10/25/95  
LON: 121° 45.4 W.

0823 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.373	33.368	25.056	289.33	0.007	84.6
5.0	13.374	33.368	25.056	289.59	0.012	84.6
10.0	13.342	33.369	25.063	289.01	0.027	84.6
15.0	13.105	33.383	25.121	283.62	0.041	84.9
20.0	12.713	33.390	25.204	275.87	0.055	84.8
25.0	11.603	33.435	25.449	252.71	0.069	87.9
30.0	11.217	33.459	25.538	244.33	0.081	88.4
40.0	11.060	33.527	25.619	236.79	0.105	89.1
50.0	10.564	33.479	25.670	232.20	0.128	89.8
60.0	10.552	33.618	25.780	221.92	0.151	89.6
70.0	10.516	33.662	25.821	218.27	0.173	89.4
80.0	10.214	33.679	25.886	212.25	0.195	89.7
90.0	10.142	33.743	25.949	206.56	0.216	89.7
100.0	10.085	33.766	25.977	204.11	0.236	89.9
120.0	9.534	33.829	26.118	191.01	0.276	90.2
140.0	9.440	33.858	26.156	187.76	0.313	90.2
160.0	8.966	33.908	26.271	177.12	0.350	90.4
180.0	8.870	33.964	26.331	171.85	0.385	90.4
200.0	8.623	33.984	26.385	167.00	0.419	90.6
250.0	7.771	34.020	26.542	152.62	0.499	90.6
300.0	7.417	34.096	26.652	142.86	0.573	90.4
350.0	6.924	34.114	26.736	135.35	0.642	90.8
400.0	6.593	34.137	26.798	130.02	0.709	90.5
450.1	6.481	34.178	26.846	126.11	0.773	89.7
500.0	6.059	34.211	26.927	118.74	0.834	85.2
550.0	5.630	34.252	27.012	110.84	0.891	90.6
600.0	5.096	34.322	27.132	99.51	0.944	90.7
650.0	4.934	34.345	27.169	96.36	0.993	90.7
700.0	4.844	34.363	27.194	94.44	1.040	90.3
750.0	4.688	34.388	27.231	91.24	1.087	90.3
800.0	4.548	34.404	27.260	88.79	1.132	90.3
850.0	4.341	34.422	27.297	85.47	1.175	90.5
900.0	4.147	34.443	27.334	82.05	1.217	88.3
950.0	3.961	34.463	27.369	78.81	1.257	87.5
960.0	3.937	34.464	27.373	78.50	1.265	87.4

STATION: 78  
LAT: 35° 52.2 N.

DATE: 10/25/95  
LON: 121° 46.7 W.

0942 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.442	33.361	25.037	291.37	0.012	85.1
5.0	13.442	33.361	25.037	291.42	0.018	85.3
10.0	13.409	33.354	25.038	291.48	0.033	85.6
15.0	13.326	33.352	25.053	290.09	0.047	85.7
20.0	13.216	33.345	25.070	288.67	0.062	85.9
25.0	12.944	33.305	25.093	286.55	0.076	86.9
30.0	11.959	33.350	25.317	265.33	0.090	88.0
40.0	11.304	33.431	25.501	248.11	0.116	88.9
50.0	11.196	33.578	25.635	235.59	0.140	89.3
60.0	10.861	33.651	25.752	224.68	0.163	89.5
70.0	10.716	33.688	25.807	219.68	0.185	89.4
80.0	10.521	33.742	25.882	212.68	0.207	89.4
90.0	10.438	33.756	25.908	210.48	0.228	89.6
100.0	10.361	33.800	25.956	206.12	0.249	89.5
120.0	10.016	33.861	26.062	196.39	0.289	90.0
140.0	9.671	33.951	26.191	184.55	0.327	90.2
160.0	9.153	34.007	26.319	172.67	0.363	90.2
180.0	8.809	33.997	26.367	168.43	0.397	90.5
200.0	8.522	33.987	26.403	165.22	0.430	90.5
250.0	7.828	34.037	26.547	152.16	0.509	90.4
300.0	7.264	34.088	26.667	141.31	0.583	90.7
350.0	6.805	34.096	26.737	135.20	0.652	90.6
400.0	6.511	34.144	26.814	128.40	0.718	90.2
450.0	6.270	34.167	26.864	124.16	0.781	90.3
500.0	5.868	34.222	26.959	115.47	0.841	90.4
550.0	5.449	34.266	27.046	107.47	0.897	90.5
600.0	5.149	34.312	27.118	100.89	0.949	90.7
650.0	4.931	34.343	27.168	96.46	0.998	90.5
700.0	4.779	34.365	27.203	93.51	1.046	90.5
750.0	4.609	34.384	27.237	90.54	1.092	90.5
800.0	4.492	34.403	27.265	88.23	1.136	90.3
850.0	4.321	34.420	27.297	85.38	1.180	90.4
900.0	4.226	34.436	27.320	83.53	1.222	89.9
950.0	4.000	34.456	27.360	79.78	1.263	89.9
985.0	3.882	34.467	27.381	77.81	1.290	88.0

STATION: 79  
LAT: 35° 53.1 N.

DATE: 10/25/95  
LON: 121° 39.3 W.

1128 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.744	33.493	25.077	287.57	0.009	83.0
5.0	13.742	33.494	25.077	287.57	0.014	83.0
10.0	13.712	33.490	25.080	287.40	0.029	82.6
15.0	12.396	33.423	25.290	267.57	0.043	80.3
20.0	11.589	33.484	25.489	248.72	0.056	88.1
25.0	11.409	33.533	25.561	242.06	0.068	88.5
30.0	11.261	33.558	25.607	237.77	0.080	88.9
40.0	10.910	33.620	25.718	227.40	0.103	89.4
50.0	10.799	33.675	25.781	221.65	0.125	89.7
60.0	10.542	33.682	25.832	217.04	0.147	89.6
70.0	10.461	33.707	25.865	214.04	0.169	89.7
80.0	10.275	33.763	25.941	207.07	0.190	89.9
90.0	10.213	33.764	25.953	206.13	0.211	90.1
100.0	9.914	33.795	26.028	199.17	0.231	89.9
120.0	9.709	33.860	26.113	191.48	0.270	90.2
140.0	9.277	33.869	26.191	184.40	0.308	90.2
160.0	9.194	33.990	26.299	174.53	0.344	90.2
180.0	8.840	34.005	26.368	168.31	0.378	90.3
200.0	8.622	34.045	26.433	162.42	0.411	90.4
250.0	7.970	34.056	26.541	152.80	0.490	90.5
300.0	7.387	34.084	26.647	143.27	0.564	90.3
350.0	6.956	34.092	26.714	137.43	0.634	90.6
400.0	6.558	34.139	26.805	129.34	0.701	90.4
450.0	6.247	34.199	26.893	121.47	0.763	90.5
500.0	5.763	34.219	26.970	114.34	0.822	90.6
550.0	5.483	34.268	27.043	107.75	0.878	90.7
600.0	5.269	34.316	27.107	102.11	0.930	89.0
650.0	5.051	34.334	27.147	98.60	0.980	89.9
700.0	4.842	34.357	27.189	94.86	1.029	89.9
749.0	4.708	34.377	27.220	92.27	1.075	88.0



STATION: 80  
LAT: 35° 53.4 N.

DATE: 10/25/95  
LON: 121° 34.4 W.

1250 UTC

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	13.742	33.502	25.084	286.85	0.010	82.3
5.0	13.743	33.502	25.084	286.95	0.016	82.0
10.0	13.737	33.503	25.085	286.92	0.030	82.1
15.0	13.312	33.526	25.190	277.14	0.045	84.3
20.0	12.361	33.532	25.381	259.03	0.058	88.0
25.0	12.083	33.547	25.446	252.96	0.071	88.6
30.0	11.983	33.548	25.466	251.21	0.083	88.8
40.0	11.453	33.635	25.632	235.61	0.108	88.9
50.0	11.117	33.670	25.721	227.41	0.131	88.5
60.0	10.810	33.687	25.788	221.19	0.153	89.0
70.0	10.559	33.697	25.841	216.41	0.175	89.8
80.0	10.448	33.719	25.878	213.12	0.197	90.0
90.0	10.390	33.735	25.900	211.22	0.218	89.9
100.0	10.307	33.756	25.931	208.48	0.239	90.0
120.0	10.059	33.808	26.014	201.00	0.280	89.6
140.0	9.487	33.911	26.190	184.57	0.318	89.6
160.0	9.226	33.957	26.268	177.50	0.354	89.7
180.0	8.924	33.994	26.346	170.40	0.389	89.6
200.0	8.355	34.070	26.493	156.61	0.422	89.7
250.0	7.725	34.050	26.572	149.78	0.499	89.5
300.0	7.466	34.082	26.634	144.59	0.572	90.3
350.0	6.510	34.118	26.794	129.54	0.641	89.8
400.0	6.364	34.143	26.833	126.52	0.705	88.9
450.0	6.200	34.177	26.882	122.46	0.767	88.3
487.0	6.065	34.195	26.913	119.85	0.811	87.8

STATION: 81  
LAT: 35° 53.9 N.

DATE: 10/25/95  
LON: 121° 30.8 W.

1347 UTC

P (dbar)	T (°C)	S (psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.561	33.515	24.923	302.20	0.012	85.1
5.0	14.559	33.515	24.923	302.24	0.018	85.0
10.0	14.113	33.484	24.994	295.67	0.032	86.7
15.0	13.406	33.553	25.192	276.93	0.047	85.2
20.0	12.900	33.534	25.278	268.81	0.060	85.9
25.0	12.147	33.580	25.460	251.67	0.073	87.7
30.0	11.863	33.616	25.541	244.02	0.086	88.2
40.0	11.282	33.638	25.665	232.46	0.110	88.8
50.0	11.053	33.675	25.736	225.98	0.133	89.1
60.0	10.948	33.689	25.765	223.38	0.155	89.0
70.0	10.839	33.699	25.793	220.96	0.177	89.0
80.0	10.766	33.709	25.814	219.22	0.199	88.8
90.0	10.170	33.789	25.979	203.62	0.221	88.9
100.0	9.956	33.820	26.040	198.02	0.241	88.8
120.0	9.938	33.823	26.046	197.92	0.280	88.8
140.0	9.859	33.832	26.066	196.40	0.320	88.7
160.0	9.645	33.872	26.134	190.39	0.358	89.0
180.0	9.375	33.911	26.209	183.61	0.396	89.0
190.0	8.370	34.006	26.441	161.38	0.413	89.1

**STATION: 82**  
**LAT: 35° 54.1 N.**

**DATE: 10/25/95**  
**LON: 121° 30.4 W.**

**1412 UTC**

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.474	33.523	24.948	299.85	0.009	82.9
5.0	14.450	33.519	24.949	299.78	0.015	83.1
10.0	13.643	33.526	25.123	283.36	0.030	85.8
15.0	13.275	33.547	25.214	274.86	0.044	86.2
20.0	12.967	33.533	25.265	270.14	0.057	86.6
25.0	11.798	33.609	25.548	243.31	0.070	88.2
30.0	11.553	33.618	25.600	238.42	0.082	87.6
40.0	11.251	33.653	25.683	230.79	0.105	88.6
50.0	11.022	33.679	25.745	225.13	0.128	88.9
60.0	10.630	33.717	25.843	215.93	0.150	88.9
70.0	10.384	33.760	25.920	208.87	0.171	88.6
80.0	10.317	33.768	25.938	207.39	0.192	88.6
90.0	10.177	33.788	25.978	203.80	0.213	88.0
94.0	10.109	33.794	25.994	202.31	0.221	88.2

**STATION: 83**  
**LAT: 35° 54.1 N.**

**DATE: 10/25/95**  
**LON: 121° 29.6 W.**

**1435 UTC**

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	%Trans
3.0	14.425	33.526	24.960	298.69	0.009	82.2
5.0	14.363	33.514	24.964	298.36	0.015	82.3
10.0	13.879	33.538	25.084	287.08	0.030	84.6
15.0	13.464	33.516	25.151	280.80	0.044	85.9
20.0	12.491	33.594	25.405	256.80	0.057	87.5
25.0	11.712	33.607	25.562	241.91	0.070	88.2
30.0	11.514	33.637	25.622	236.34	0.082	88.4
40.0	11.298	33.654	25.675	231.52	0.105	88.2
42.0	11.256	33.660	25.686	230.50	0.112	92.2

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